EXCAVATIONS AT DWARKA: 1963

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44

EXCAVATIONS AT DWARKA
(1963)

By

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Deccan College Postgraduate & Research Institute
Poona 6



Dwarkadhish Temple

EXCAVATIONS
AT
DWARKA

By

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Foreword

ON THE 15TH OF OCTOBER 1964 *the Deccan College celebrates the centenary of its main Building, and curiously enough this period coincides with the Silver Jubilee of the Postgraduate and Research Institute which, as successor to the Deccan College, started functioning from 17th August 1939 when members of the teaching faculty reported on duty. When I suggested to members of our faculty the novel idea that the centenary should be celebrated by the publication of a hundred monographs representing the research carried on under the auspices of the Deccan College in its several departments they readily accepted the suggestion. These contributions are from present and past faculty members and research scholars of the Deccan College, giving a cross-section of the manifold research that it has sponsored during the past twenty-five years. From small beginnings in 1939 the Deccan College has now grown into a well developed and developing Research Institute and become a national centre in so far as Linguistics, Archaeology and Ancient Indian History, and Anthropology and Sociology are concerned. Its international status is attested by the location of the Indian Institute of German Studies (jointly sponsored by the Deccan College and the Goethe Institute of Munich), the American Institute of Indian Studies and a branch of the Ecole Francaise d'Extreme-Orient in the campus of the Deccan College. The century of monographs not only symbolises the centenary of the original building and the silver jubilee of the Research Institute, but also the new spirit of critical enquiry and the promise of more to come.*

7th March 1964 S. M. KATRE

Preface

INDIA IS A CLASSIC *land of legends and traditions. Every Indian, whether he be Hindu or non-Hindu, educated or illiterate, rich or poor, wants to know when the epic heroes Rama and Krishna lived. In his imagination he associates certain places and objects with these heroes. When these people meet an archaeologist they naturally ask him about the antiquity of these heroes and the places like Nasik and Dwarka associated with them. Frankly, to such queries no answer can be given, unless we have proved the antiquity of these places and found some objects or writings of the times of Rama and Krishna.*

The antiquity of a place can only be proved archaeologically. And this the Department of Proto-Indian and Ancient Indian History at the Deccan College is trying to do for the last twentyseven years. Its approach is twofold. First to stratify the ancient literature with the help of archaeology, coins, images and inscriptions. This will be a kind of hypercriticism of the Puranas and the epics. Secondly, to conduct excavations on ancient sites like Nasik, Maheshwar, Dwarka with a view to finding out their antiquity stratigraphically, and date the various layers objectively and now with the new scientific methods absolutely.

In pursuance of these aims, the Department has so far carried out studies in the Cultural History of the Vayu Purana, analysed the iconographic elements from the Mahabharata and traced the development of Jaina Monachism with the help of epigraphical material. The first and third of these works, by Dr. D. R. PATIL *and by* Dr. S. B. DEO *respectively are published. The second by* Dr. B. N. CHAPEKAR *will be shortly sent to the press.*

The second approach is more difficult. It depends upon large funds, co-operation from other States, their Departments of Archaeology and the public.

As opportunity presented itself, the Department conducted excavations at Nasik in 1950-51, Maheshwar in 1953-54. Currently it excavated at Tripuri. These modest attempts have succeeded in showing that while Nasik and Maheshwar sites are at least 3,000 years old, Tripuri is not.

The present work on Dwarka, planned on a very limited scale owing to various reasons, helps, I think, in demonstrating that the present Dwarka on the western coast of Saurashtra is at least 2,000 years old. From this step we have to go further backwards in time in search of still earlier Dwarkas, which may lie hidden, in the vicinity of the present Dwarka or elsewhere.

In such an attempt, it is hoped, the same generous and spontaneous co-operation will be received from the Gujarat State as in this venture.

August 16, 1966 H. D. SANKALIA

AUTHORS' NOTE

A LARGE NUMBER of people whose names find thankful mention in the Introduction were helpful in seeing the work of the excavations through. Here we would like to record our thanks to those who have helped us in the preparation of this Report. Sarvashri S. K. KULKARNI, Y. S. RASAR, P. R. KULKARNI, R. B. SAPRE, C. G. PADVAL and R. B. WARKE have prepared the line-drawings. Shri S. H. GIRME has prepared the photographs. Shri P. S. MUJUMDAR has typed the text.

The beautiful photograph of the Dwarkadhish temple on the Frontispiece could be reproduced here through the kind courtesy of Prof. M. R. MUJUMDAR, M. S. University, Baroda.

We owe a permanent debt of gratitude to Prof. H. D. SANKALIA, our *guru*, who guided us in the excavation work as well as in the preparation of this Report. We are grateful to Dr. S. M. KATRE, Director, Deccan College for having accepted the Report for publication in the Centenary Monograph Series.

August 16, 1966

Z. D. A.
M. S. M.

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DWARKA

DWARKA IN LITERATURE AND ARCHAEOLOGY

By

H. D. Sankalia

THE LOCATION and antiquity of Dwarka[1] have been discussed by scholars now for nearly a century. PARGITER was perhaps the first to refer to this problem, though incidentally, in his translation of the *Mārkaṇḍeya Purāṇa*[2]. Then, as usual, other Purāṇas and the *Mahābhārata* (*Mhb*) were ransacked and three places in Saurashtra were sought to be identified with the city of Dvārakā, which the Yādavas under the leadership of Kṛṣṇa are believed to have founded, when they fled from Mathura.

The three places are (Fig. A):

(1) Modern Dwarka, in ancient Okhāmaṇḍala or the present district of Jamnagar.

(2) Junagadh, or ancient Girinagara.

(3) Mūla-Dwarka, a small place—an island—about 22 miles from Prabhas Patan, on the south-west coast of Saurashtra, in the present district of Junagadh or alternatively some place on this coast, up to Porbandar.[3]

Since the literary evidence has been cited, sometimes exhaustively as late as 1945, it is not proposed to go over it once again, but the salient points are here discussed.

The claims of the present Dwarka were rather dismissed in a cavalier fashion by ALTEKAR,[4] when he concluded that there were no references

1. As spelt in the *Gazetteer of the Bombay Presidency*, Vol. VIII, Kathiawar, p. 587. The correct transliteration would be 'Dvārakā'.

2. Translated with notes in *Bibliotheca Indica* (Calcutta, 1904), p. 289 n.

3. BURGESS, *Antiquities of Kaccha and Kathiawad*, (1876), p. 13.

4. 'Ancient Towns and Cities in Gujarat', published in *IA*, Vol. 54 (1925), p. 25, as a supplement.

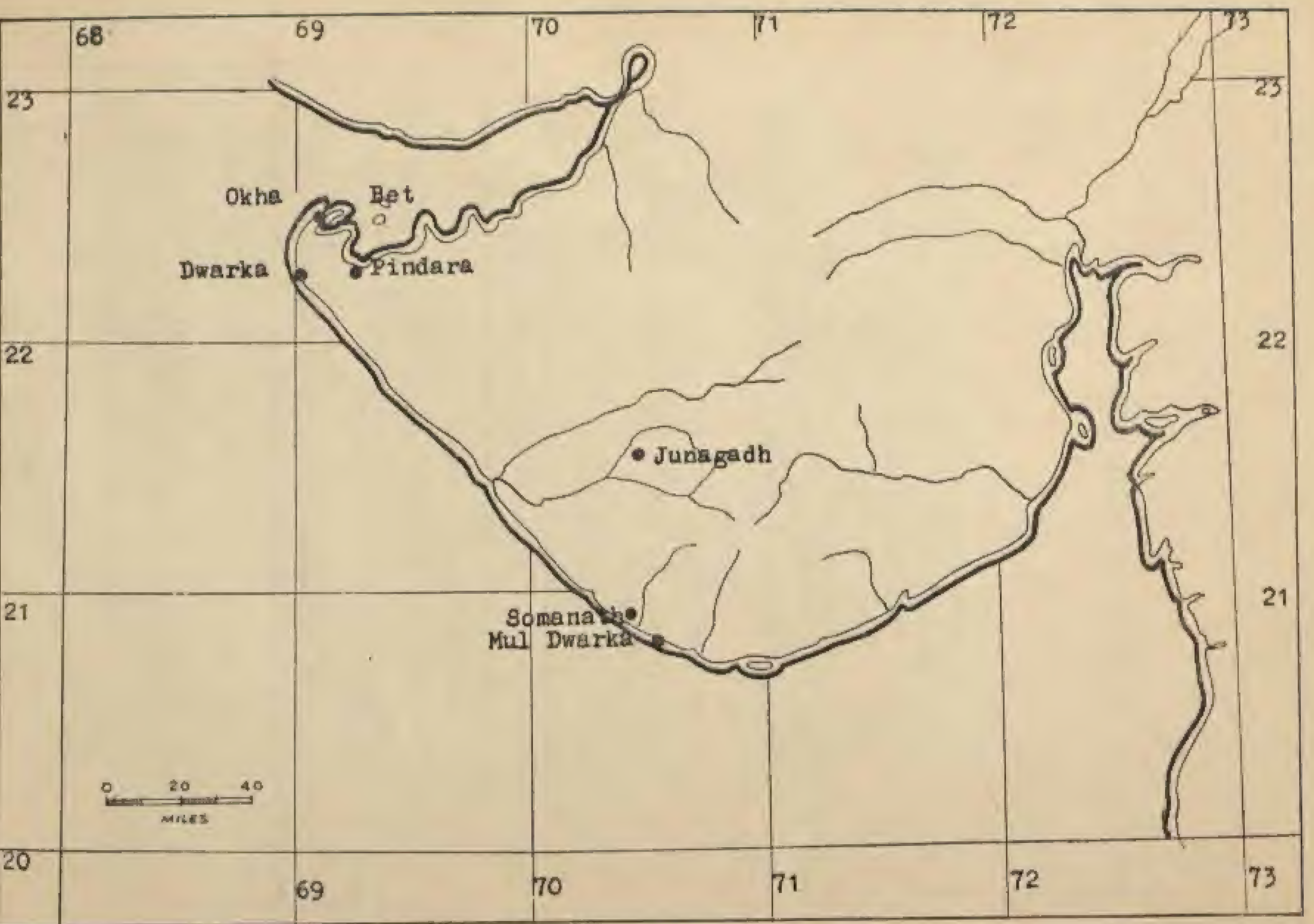


FIG. A. Map of Saurashtra
(showing the likely sites of Kṛṣṇa's Dwarka)

to it in inscriptions or literature before 1000 A.D. and that it had not suffered at all from Muslim vandalism, though he accepted the tradition about the ancient sea-sunk city of Dvārakā and said that it should be at least as old as the 3rd century B.C. BHATTASALI[5] and Durgashankar SHASTRI[6] (in Gujarati) and after them KARMALKAR[7] (in Marathi) discussed the relevance of the epic and Puranic references, and pointed out that the *Mhb* references were of two types. Those in the Ādi and Sabhā Parvas referred to a Dvārakā near the hill Raivataka, and no reference at all was made to the city being near the sea, or its later drowning by the natural calamity. It was in the Musala Parva for the first time that Dvārakā's foundation in or near the sea and the later tragedy were first alluded to.

The same view seems to have been held by the Purāṇas: the *Vāyu* and the *Viṣṇu* agreeing with the Ādi and Sabhā, and the *Bhāgavata*, *Harivaṁśa*, and others following the Musala.

On the strength of these divergent views about the location of Dvārakā in the *Mhb*, Dr. KOSAMBI[7a] has gone to the length of suggesting that this might have been in Afghanistan, for there are places like Darvaz in Afghanistan which bear much the same name as Dvārakā—'the many-gated'. Secondly, he says that the *Mhb* states emphatically, more than once, that Dvārakā was to the west of Mathura. Further, to go to modern Dvārakā from Mathura means crossing a desert where the herds would be killed off, and probably the human beings, too.

None of these arguments is convincing. In the first place, we do not know the antiquity of places like Darvaz. For all we know these might not be older than 12th century A.D. Whereas, in Saurashtra itself, as shown in the sequel, we have references to Dvārakā going back to the 5th-6th century A.D.

Again, this Darvaz in Afghanistan would not be to the west of Mathura but to the north-west, whereas the present Dvārakā in Saurashtra is to the south-west. Thus the *Mhb* reference does not suit exactly any of

5. *IHQ*, Vol. X, pp. 541-50; also *JUB*, Vol. III.
6. *Aitihāsik Samshodhan*, Gujarat Sahitya Parishad, Parishad Series No. 1. Bharatiya Vidya Bhavan, (1941), pp. 59-64.
7. *Navbhārat*, February 1961.
7a. KOSAMBI D. D., "The Historical Krishna", *Times of India Annual*, 1965, p. 31.

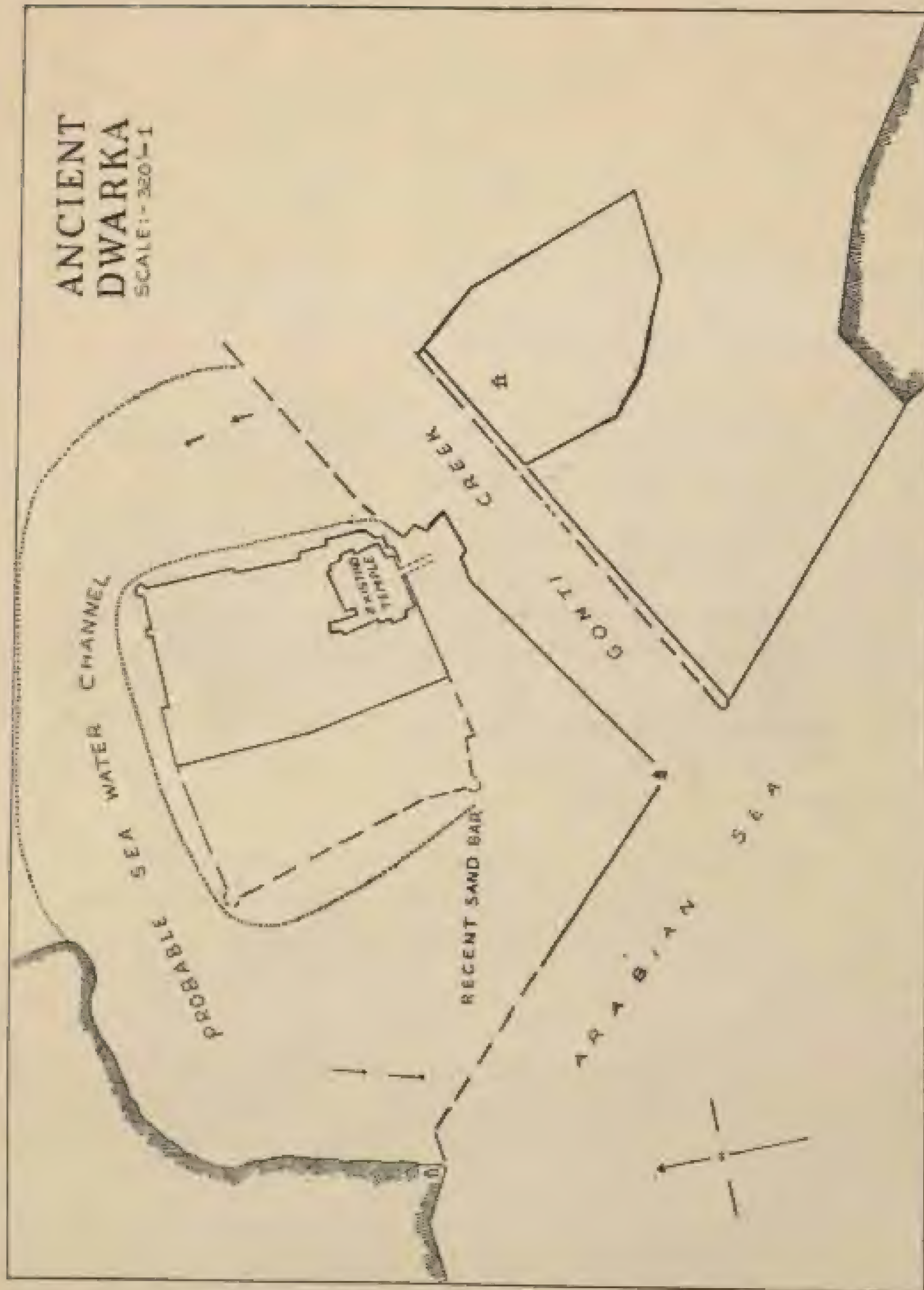


FIG. B. Map of Dwarka
(showing the site of the ancient port and the temple of Kṛṣṇa)

the places. What we have therefore to understand is the general direction of Dvārakā from Mathura.

And lastly, the Rajasthan desert is not such a barrier. From times immemorial—right from Early Stone Age—it has been crossed by men of various types and professions, hunters, caravans, armies and travellers. And possibly the road from Mathura to Saurashtra lay along one of the present highways and railways—Mathura, Jaipur (near where at Bairat there is an Aśokan edict and Stupa), thence to Pushkar, and Mt. Abu, and thence through northern Gujarat—the ancient Ānarta—to Saurashtra, or *via* a more northerly route.

Thus we must reject this suggestion.

Other scholars, therefore, thought that the Ādi referred to an earlier and truer tradition existing prior to the 2nd century B.C., whereas the Musala and other Purāṇas had in view a much later tradition.

According to this stratification in the Puranic tradition, they identified the Dvārakā near the Raivataka hill with Junagadh or the ancient Girinagara. The question of Dvārakā in the later references was not discussed.

Soon after, LAW brought together the references in early Buddhist and Jaina literature but made no attempt to identify or locate it.

PUSALKAR reviewing the entire evidence pointed out that though the *Mhb* and the Purānic evidence were divergent, still the identification of Dvārakā with Girinagara was not free from difficulties. In the first place, it was against the persistent tradition of Dvārakā being near the sea, and drowned by it, and that the area near the present Junagadh could never be this place because it is some 60 or so miles away from the sea.

To this we may add the fact that it has so far not yielded anything older than the third century B.C. But while we say this it must not be forgotten that there must be some reason—either geographical, political, or commercial (that is strategical) or traditional why Aśoka thought of transcribing his edicts near Girnar. It is not impossible that the place was old and therefore he chose it as his capital in Saurashtra. If this is so, then the region around Junagadh deserves a careful search. Some

prehistoric mounds might be lurking in the jungles around the hills. Of course, the existence of a prehistoric site at Junagadh would not necessarily prove the location of Kṛṣṇa's Dvārakā there.

So the claims of ancient Girinagara for being regarded as the site of Dvārakā remain unproved.

Mūla-Dwarka[8] is in the same boat. No hills are nearby, nor do we know of any prehistoric mounds there, though here the case is not so bad. For about 2 miles from modern Prabhas or Somnath, there are extensive deposits of a Chalcolithic culture along the banks of the Hiranya river. This site would be the Ādya Prabhāsa of the *Skanda Purāṇa*.[9] And so the remains of Yādava's Dvārakā might not be far off, it might be argued. At the moment nothing can be said for this view, for we are totally in the dark. The same is true of any likely site on the south-west coast of Saurashtra.

We then come to the remaining alternative, viz. Dwarka in Okhamandal. Its case has been very well argued by PUSALKAR.[10] He showed that as far as the descriptions of the location of Dvārakā in the Musala Parva of the *Mhb*, the *Bhāgavata* and particularly the *Harivaṁśa* go, as well as the existence of temples of other gods is concerned, and the occurrence of certain shells marked with a lotus on them and referred to in the *Mhb* is concerned, the present Dwarka fitted the position admirably. He also pointed out, after PARGITER, some 60 years before him, that the so-called Raivataka hill near which Dvārakā was situated might be the Barda hills, and not Girnar. These are about 55 miles south-east of Dwarka.

Only one point PUSALKAR could not satisfactorily answer; and that was the likely priority of references in the Ādi and Sabhā Parvas over the later ones, and the complete absence of references to Dwarka in inscriptions, particularly of Gujarat-Saurashtra.

Both these objections can be very well met. First, PUSALKAR seems to have missed the significance of the reference to Dvārakā in the *Ghaṭa*

8. *BG*, Vol. VIII, p. 552. It is on a small mound. Nearby is the port of Kodinar. SHASTRI, Hathibhai, *Proceedings, Oriental Congress*, Vol. VII, pp. 1171-72.

9. According to the information kindly supplied by Shri M. A. DHAKY.

10. PUSALKAR, A. D., 'Dvārakā', *B. C. Law, Volume I* (Calcutta 1945), pp. 218-24.

Jātaka, first cited by LAW.[11] This *Jātaka*[12] gives an interesting history of Vāsudeva (Kṛṣṇa) and his nine brothers, who are said to have conquered a number of states and ultimately settled at Dvārakā, on one side of which was a hill, and on the other the sea.

Now the Jātakas are believed to contain very ancient traditions, and their composition in their present form is not later than the 3rd century B.C. So here is an independent source, other than the epic and Puranic, which tells us that Kṛṣṇa's Dvārakā was on the sea. On the strength of this Buddhist tradition it is possible to argue that Musala Parva in the *Mhb* and other Purāṇas are handing down this tradition, which need not be necessarily late.

Again, an inscription of A.D. 574 belonging to one Gārulaka Siṁhāditya,[13] found nearly a 100 years ago at Palitana in Saurashtra, tells us that his father Varāhadāsa (II) was like Śrī Kṛṣṇa of unquenchable valour and had conquered the lord of Dvārakā. And it has been shown by me elsewhere[14] that Varāhadāsa must have ruled somewhere near Bhatia, which is only 25 miles from Dwarka.

More than any other evidence—epic, Puranic, Buddhist or Jaina which cannot be exactly dated—this one epigraphical allusion informs us that at least some centuries before the sixth century there existed the tradition that Kṛṣṇa had founded Dvārakā and this was situated on the sea, on the site of modern Dwarka. Whatever might be said in favour of other sites, considering all the literary evidence, we can say with greater confidence than PUSALKAR that the present Dwarka was regarded as the site of Kṛṣṇa's Dvārakā, at least from the beginning of the Christian era, if not some centuries before it. But this antiquity should be proved archaeologically and PUSALKAR had the foresight to suggest it, though earlier BHATTASALI had bemoaned the fact that nothing had been done by the archaeologists (he meant the Archaeological Survey of India) to prove the antiquity of traditional sites like Hastināpur, Dvārakā and Ayodhyā.

11. LAW, Bimala Churn, *India as Described in Early Texts of Buddhism and Jainism*, (London, 1941), pp. 85, 102, 132, 167, 215, 239.
12. *The Jātaka* ed. by V. FAUSBOLL (London, 1887), Vol. IV, pp. 82-85.
13. In *Journal of Gujarat Research Society*, Vol. XXV, 100th No 1963, p. 293.
14. *EI* Vol. XI, p. 18, ll, 11-12

Unfortunately nothing was done to follow up this very intelligent suggestion of Dr. PUSALKAR for nearly twenty years and more. A few years ago Professor ABHYANKAR from Nasik tried the aerial survey, and claimed that he had noticed the remains of the buried city. I always wondered how one could be so sure without actually handling the remains !! These, if at all there, could be of several periods, as we later found. The question was again brought to me when I visited Dwarka in October 1962. Here I met Dr. Jayantilal THAKAR, who put before me the evidence that he had gathered from his observations of the ruined houses, dug-up roads and drains. This evidence consisted of silver Gupta coins, Red Polished Ware and some other pottery of unknown fabric and age. However, the writer was convinced that if the Red Polished Ware as well as the silver coins of the Guptas had been really found at this place, then the site must go back at least to the 2nd century A.D. Accordingly an excavation was conducted here jointly with the Department of Archaeology, Gujarat State.

Before the results of our excavation are described it is necessary to see in some detail what the *Harivaṁśa* has to say about Dvārakā, and then compare this description with the topography of modern Dwarka. For, this will facilitate the final identification.

With regard to the foundation of Dvārakā, some Purāṇas describe it in very general terms, but the *Harivaṁśa*, which is in a sense an epilogue to the more famous epic, the *Mahābhārata*, gives it in greater details.

The *Harivaṁśa* definitely states that the site selected for Dvārakā was in Kuśasthalī (the latter is also called at places a *nagarī* (town or city ?); that it was situated on the sea, and the land was full of coconut and other trees, and animals like cows, buffaloes, elephants, pigs and deer. Further the hill of Raivataka was not very far off. Giving some idea of the land surface it is said to be copper-red in colour, and covered with thorny bushes and stones. Twice we are told the land available for the future city was insufficient, and therefore, some land had to be reclaimed from the sea (literally, the sea retreated on Kṛṣṇa's request).

This done, the celestial architect Viśvakarmā built a city in no time, laid out roads, parks, palaces and houses. Special provision was also made for an assembly hall, temples or palaces for Kṛṣṇa himself and his family and

the gods Agni, Varuṇa and Indra. A fort wall with ditches was also constructed round the principal buildings. The former was provided with four or more gates, hence the city was called "Dvāravatī".

Though it would appear that this Dvāravatī was a brand new city, there are statements which imply that a small city or village of this name was already existing before the Yādavas, under Kṛṣṇa, chose it for their second home. Of course, such statements which look anachronistic or confusing are bound to occur in a work which purports to narrate a past event in future tone.

However, the *Bhāgavata* (another Purāṇa) seems to be more clear on this point. It says that Revata, son of Ānarta, had built Kuśasthalī in the sea. Though thus the name of Dvārakā does not appear, one can be sure that there was an earlier habitation here known as Kuśasthalī (literally a place having *kuśa* grass).

Leaving aside for a moment the question that there are two places which claim to be the site of ancient Dvārakā, let us now turn to modern Dwarka. The latter is situated on the western coast of Saurashtra just where the land juts out more prominently into the sea than anywhere else on the peninsula. Physiographically and even culturally, it is different from the rest of Saurashtra. An area of over 300 sq. miles—known as Okhāmaṇḍala—is practically an island and has been formed by sedimentary rocks full of marine fossils. For the most part, it is flat, almost like a table top (and thus an ideal ground for motor driving or even racing), with occasional low hillocks made of fine clay or limestone. To the north-east of Dwarka these form an undulating semi-circle. (Fig. 1). The low-lying areas are marshy and difficult to traverse during or soon after the rains.

The vegetation is scant. Scrubby acacia and thorny cactus (*thur*) seem to be native and supply fuel to the people even now. But where there is good land, and sweet water available, as around Variava, a few miles north of Dwarka, luxuriant trees and orchards can be developed. This land is said once to be full of herds of deer (possibly this is implied by the place-name '*Kurangī*', now a railway station), wild pigs and cattle. Now only the latter two remain, the former having been almost exterminated.

Vaghers are believed to be the aboriginal people, though, looking to their physiognomy, tall with straight nose, clear cut features, and darkish, these seem to have come from Sind, and emigrated from Central Asia in prehistoric times. Other people in smaller numbers are Rabaris, Charans, Brahmins—the Guggalis and Abotis—Lohanas and Baniyas. Thus there is abundant evidence everywhere that the land was once under the sea, and various groups of people have at one time or another come from outside. An imaginative writer could well say that it was reclaimed from the sea. This too in a natural way, by simply the sea retreating (and not by filling up as was done at Bombay).

Secondly, copper-red rock and the resulting sands and clay can be easily seen at numerous places in and around Dwarka.

But the one reason which seems to have drawn early settlers here was a harbour, which like Bombay, does not lie on the open sea on the west, but in a creek formed by the so-called Gomati river on the east. It is now silted up, but until a few years ago, large ships could come in at high tide. And H. H. the late Sayajirao GAEKWAD of Baroda had built a dock along the Gomati and a *ghāt* (landing place) on the opposite side with huge stone pillars to facilitate tying in of the ships. (Fig. B).

Then here where the Gomati meets the sea were built on the ancient rock surface the temples of Indra, Varuṇa, Sūrya-Nārāyaṇa and a little on the interior the famous temple of Kṛsṇa, as lord of Dvārakā, "Dvārakādhīśa". This is nearly 180 ft. high from the ground level and can be seen from miles around. This as well as the other temples, as they stand today, are admittedly of a later date, but it is very likely that they stand on the ruins of ancient temples, probably of identical deities. This time should not be later than the 7th century, as indicated by the architectural style of the temples, and the associated pottery which we recovered from our excavations at Suvarṇa Tīrtha and Piṇḍārā. The existence of these places of pilgrimage and particularly of Śaṅkhoddhāra or what is now called Beṭ Dwarka, gives a vivid and specific clue for its identification, viz. the occurrence of shells with lotus (*padma*) engraved on them. Now these occur only here and nowhere else.

Two topographical features of the present Dwarka admirably fit in with those given in the *Harivaṁśa* and the *Bhāgvata*, whatever the claims

of other places like Mula Dwarka to be regarded as the ancient Dvāravatī of Kṛṣṇa. Here is a flat, rocky land, which was formerly under the sea, and has copper-red sand and clay and is full of thorny bushes. Kuśa grass also grew once in abundance. But above all it was a natural harbour which though out of use now, was probably the main attraction to newcomers, whether arriving here as refugees, invaders or traders. And that is what the name 'Dvārakā' or 'Dvāravatī' means, 'a gateway', or 'one having gates'—to the west or to the land within. And probably because it was a port, or a prominent place on the coast, that the author of the *Periplus*, a Greek work of the first century A.D., mentions the island as Barake in the Gulf of Kutch.

Dwarka has thus all the natural advantages to be chosen as a safe refuge place by a people in peril, whether they be Yādavas or anybody else. But how should one determine this period of the earliest colonization at Dwarka, and the vicissitudes through which it had passed? The present city can be divided into two or three parts. The oldest is clustered around the temple of Kṛṣṇa called "Dvārakādhīśa". The latter dominates the scene, being a prominent landmark for miles around, situated as it is on the highest part of the city and also because the temple's *śikhara* (tower) is unusually tall, being built of several stories. Round this 'ancient city' is a fort. Outside are situated other temples, a few right on the sea-shore, and the modern houses, schools, library, the railway station and the A.C.C. factory within a radius of two miles to the north-east, and the light-house on the west.

The oldest Dwarka then lies within an area of less than a square mile. That it is situated on a rising ground should be obvious, even to a casual visitor. But is this a natural eminence—a rock or an artificial mound made of debris of several earlier habitations? An archaeologist, however experienced, could never say anything. For there is not an inch of open ground which he could examine.

To his rescue came Dr. Jayantilal THAKAR, a resident of Dwarka. During his long stay here and a careful and intelligent study of the topography of the area, as well as observation of the foundation of houses and laying of roads and digging of wells, he had noted the remains of earlier buried houses and that indestructible indicator of past cultures and civilizations—pottery—besides, of course, a few coins, bangles, bones,

shells and sand. What an archaeologist does or has to do before undertaking an excavation Dr. THAKAR had done. He had collected evidence, which is normally available, prior to an excavation, from explorations and topographical study and ancient traditions and legends.

From this Dr. THAKAR had come to the conclusion that the most ancient Dwarka of Krishna's time lay under or adjacent to the temple of Dvārakādhīśa. This was later submerged in the sea. Centuries later other Dwarkas rose up over this sand-covered city. A very legitimate inference which can only be checked by a careful digging, removal of layer after layer, of all the later buildings and reaching the virgin rock-bed over which might lie the remains of the earliest habitation, covered no doubt by a layer of sand. From Dr. THAKAR'S calculation (which we later checked by noting the contours with the present sea level) we had to penetrate an accumulation of nearly 35 to 40 feet to reach our objective.

Normally, this should not be difficult to attempt in an open area. Here it was different. The area was heavily congested. A house had to be acquired, then demolished and then a trench, indeed a large pit or *sondage*, cut through, a most difficult and unromantic operation when it is realized that there are houses around built with dry masonry and rarely plastered with cement or lime. Thus we had not only to safeguard our safety and that of our diggers, but of the houses and their inhabitants including two cows which were tethered in the passage between the houses.

Since there was no other way to prove the antiquity of Dwarka, this hazardous excavation was undertaken, jointly with the Department of Archaeology, Gujarat State. Its Director and Assistant Director, Dr. D. L. SHARMA and Shri J. M. NANAVATI, were most co-operative and helped us in various ways. They not only acquired the house, but helped us in demolishing it and later their Conservation Assistant Shri M. K. ANJARIA assisted in the conservation of the surrounding houses. Dr. THAKAR was of inestimable help all the time. Later when the problem of structural engineering, such as the sinking of a wooden cabin into the sand to protect the sides from collapsing arose, the advice of Shri Manibhai THAKAR and Shri PANDYA, retired Deputy Engineer, saw us through a most anxious time. Shri LADVA, the Mamlatdar of the town, also assisted in times of need. To all these friends, my colleagues and myself are grateful.

Though the over-all planning and execution of the project was done by the writer, much of the actual work was carried out by his two lieutenants, Dr. Z. D. ANSARI and Dr. M. S. MATE. They were ably assisted by Shri P. R. KULKARNI and later on by two of our pupils, Shri N. M. JOHN and Miss Katy FRENCHMAN, and Shri C. N. S. MURTHY.

The house we demolished was situated immediately to the north-west of the main temple, being separated from it by a small lane. The actual digging area at our disposal was 8×6 metres (about 25 ft.×20 ft.). This was fully dug out upto a depth of 12 ft., but when sand was struck, only half the area, about 10 ft.×10 ft. was chosen for deep digging, as a measure of safety. The latter from a depth of about 20 ft. was further restricted to an area of 6 ft.×6 ft. as a series of wooden shorings had to be erected into this narrow space to prevent the sandy walls from collapsing. To us accustomed to an open air digging, this was a novel experience. For not only was it extremely uncomfortable to work into the narrow pit, but there was the constant fear of the sides caving in, if for some reason the upright planks and the cross beams gave way under the weight of the sand and the overlying stone structures. This fear was not misplaced, because in the closing stage, when the third shoring was being inserted at a depth of 24 ft., one of the sides developed a huge crack just where the sand layer began. This necessitated the immediate closure of the work. It could be later resumed with the strengthening of the shorings, but not without considerable misgivings in our mind.

Within the narrow space, we could reach a depth of 38 ft., that is almost the surface of the rock and the sea today.

This deep vertical excavation revealed the remains of four habitations, four Dwarkas with 2 sub-Phases in Period IV (Fig. 3). The characteristic features of each as indicated by our limited evidence were as follows:

The foundation of the First Dwarka might be placed at a period, just *before or around* the beginning of the Christian era, but not much earlier. Though no idea of the houses etc. at this time can be had, there is no doubt that the inhabitants knew the use of wood, iron and a fine pottery. Among the last we notice several fabrics: very coarse, fine and painted, all mostly having a reddish surface. The one with a fine red slip or coating has a deep black core made of well levigated clay and fairly well-baked. Though no

full shapes were available, one can visualize such shapes as small and large globular vessels with narrow or wide necks, having thick rim-band on the outside, which was deeply cut, thus showing a fine overhang with sharp edges. (Fig. 15). Then there were bowls and storage jars with thick sides. (Fig. 17). In addition to the beautiful red slipped and painted narrow-necked vessels, there were vessels with extremely thin sides. Since only fragments of this are found, no idea of their shapes can be formed.

A large proportion of the potsherds is rolled, that is, they show the effect of water action, having been tossed about in the sea and lying buried in the sand for 2,000 years. This proportion goes on increasing as we touch deeper and deeper levels. Two curious facts, however, deserve notice. Some sherds have escaped this damage completely, even though recovered from a depth of 31 ft. The other is that a few sherds from the same level still preserve the soot on the inner side after all this time! At the moment, we are unable to account for this marked difference in the pottery from identical levels, for no pits or other disturbances are noticeable in the sandy medium in which we were digging and secondly, no strata, if any, were available for inspection.

\The 'First Dwarka' lies buried under nearly 20 ft. of sand, obviously because of the encroachment of the sea. But there is archaeological evidence from our excavations at Suvarṇa Tīrtha, about three miles to the north and Piṇḍārā, about 15 miles due east, of Dwarka, that this was a local phenomena confined to a small area of not more than a mile or so in circumference. (Fig. 1). For at these latter sites the inhabitants using identical pottery continued to live. This by the way can be gleaned from a careful study of the *Harivaṁśa* and other accounts as well.

Whether the sea continued to heap on sand for years together or whether the phenomenon was sudden and of short duration, cannot be easily determined. No less than 20 ft. of sand has been deposited and if the physical condition of a large number of potsherds found practically throughout this thick deposit is any guide, then we might infer that the process went on for some time, and that is why a large proportion of the potsherds is 'rolled'.

Whatever it is, when the sandbar of about 20 ft. in height had accumulated, attempts seem to have been made to settle on it. For remains

of two fragmentary walls made of local sandstone were found in our pit. (Plate II, b). These rested right on a bedding of reddish sandy foundation, a practice which is current even today.

The evidence of 'Second Dwarka' might appear flimsy. However, the pottery associated with this phase indicates a momentous change. Along with the potsherds of the earlier phase, we now notice fragments of the Roman or Mediterranean amphora and another characteristic pottery which because of its uniform red core and lustrous smooth surface is called the Red Polished Ware (RPW). (Fig. 19, No. 70).

Not only the fabric but the shapes are extremely specialized and include some bowls and sprinklers—a vessel having a small vertical neck with a narrow opening, and a spout, similarly made but on the side. While the amphora were definitely imported with the wine (and women, the latter having been irretrievably lost), the Red Polished Ware was an excellent copy of the famous Arretine and other wares of the Roman Empire. Saurashtra has so far produced the largest quantity and the best type of Red Polished Ware. And it had also been shown by the late Dr. SUBBARAO of the Baroda University that specialized kilns for manufacturing such extremely well-baked pottery with Mangalore tile-like texture, still continued to survive in Saurashtra.

Even this 'Second Dwarka' was covered by the sea, burying it under nearly 6 ft. of sand. Thus when the next inhabitants came, the area around the present temple had grown into a small mound, some 24 ft. higher than the surrounding plain.

Before turning to the next phase, a reference should be made to 'a lingering tradition' (recorded in the *Gazetteer of the Bombay Presidency*, Vol. VIII, Kathiawar, 1884, p. 588). According to this legend, 'the old town of Dwarka was swallowed up by the ocean' during the reign of one Sukkur Belim, a Syrian adventurer. This again, according to the tradition, had taken place after the country had been reconquered by the Kalas, a local people in the middle of the 2nd century A.D. Since the country was under the possession of the Chāvaḍās in the sixth century, the rule of Sukkur Belim would fall between the 2nd and the 6th centuries. It is at this time that the Old Dwarka was submerged in the sea, according to the local tradition, and a fine confirmation of it has been found in the excavation.

The 'Third Dwarka' had to be built on a sandy mound. Hence the foundation of houses had to be secured by a stone filling, over which a regular platform of stones was laid. (Fig. 5). Besides this constructional feature, it was interesting to find in the debris and walls of this period, mouldings and finials of temples with small spires (*śikharas*) in the neighbourhood (Plate IV). A small rectangular shrine of stone with a tapering roof, surmounted by a finial lies most inharmoniously and unsymmetrically in the *maṇḍapa* (main hall) of present temple today. Architecturally it seems to be the earliest shrine at Dwarka, and along with similar shrines on the western seaboard of Saurashtra, should be placed in the 5th-7th century A.D. Thus the beginning of our 'Third Dwarka' should be placed in this period. Dwarka as a religious place connected with Viṣṇu's various incarnations, and particularly Śrī Kṛṣṇa, seems to have gained in prominence at this time, due no doubt to the great popularizing of the Purāṇas, under the Guptas.

From the 8th-9th century Dwarka's progress was continuous, though it is said to have suffered seriously at the hands of the iconoclasts. A beautiful temple (said to be that of Rukminī, though there is no evidence to support this attribution), no doubt dedicated to a goddess of the 12th-13th century stands disfigured on the shore. Similar destruction and damage must have been caused to the main temple, adjoining our site. But of this no evidence came forth from our dig. We only found houses built over the foundation of the earlier ones, and this no less than four to five times. The inhabitants of the houses after the 13th century introduced new cultural features—a drab coarse red and black pottery, but beautiful glass bangles, some polychrome. One large piece having the diameter of nearly three inches should belong to a hefty woman. (Plate VII, c). As shown by me elsewhere and now being proved every year, the art of making such polychrome glass bangles, as also glazed and celadon ware, was brought into India by Iranian Muslims in the 14th century.[14a] The occurrence of the glazed and celadon ware should be attributed to the same source.

14a. Hitherto only broken pieces of China ware were found in several excavations in layers dated by coins and other evidence to 13th-14th-15th century A. D. But recently Prof. P. B. GADRE of the Ahmednagar College, Ahmednagar, found indeed a 'hoard' of several intact China vessels, bearing Chinese inscriptions in a huge storage jar in an old locality at Ahmednagar.

though it must be emphasized that certain glazed pottery might have an earlier existence as at Rangmahal in Rajasthan.

The occupants of the immediately succeeding period used fine and delicate articles of ivory, (Plate VI, c) of which we recovered a few. They also possessed elaborately made terracotta toys. (Figs. 12 and 13). Just before the existing house was constructed some fifty years ago, a shop selling large conch-shells stood there, for in one place we unearthed no less than fifteen carefully kept conch-shells.

Within the space available, we had reached our objective, and showed that the site of present Dwarka is at least 2,000 years old, its early inhabitants bearing some relationship with those in distant Rajasthan. For some of the pottery fabrics and shapes are identical with those unearthed by the Swedish expedition in Bikaner. But what the sociological background of this Dwarka was, and whether any still earlier remains exist which can be ascribed to the epic Kṛṣṇa, we cannot say, unless a much bigger excavation is made possible.

From our observation of the various places in and around Dwarka as also from the evidence of excavation one can definitely say that this is the Dvārakā mentioned in the Musala Parva of the *Mhb*, the Dvārakā-mahātmya of the *Skanda Purāṇa*, other Purāṇas and the Ghaṭa Jātaka. In particular, one can say that the Dvārakā described in such a great detail as a sacred *tīrtha* by the *Harivaṁśa*[15] probably came into existence after the second submergence in the sea of two earlier Dvārakās, because it gives very minute description of so many temples, and this could have been possible only by a writer who had probably visited Dvārakā and seen the temples. But the writer was quite sure that Dvārakā which he was describing was twice submerged into the sea and therefore the earlier Dvārakā he thought, belonged to Śrī Kṛṣṇa. Of course, of this we have no positive evidence excepting the fact that it is possible to say that the earliest Dvārakā was founded, at least in the 1st-2nd century B.C.-A.D. and of this we can say much more when in future there is a chance to excavate it on a much larger scale.)

15. This was also the view of Durgashankar SHASTRI. But he placed the *Harivaṁśa* in the 1st-2nd century A.D., whereas we would place it in the 7th century.



Fig. 1. Map of Okhamandal

I

INTRODUCTION

The town of Dwarka (69° E and 22°. 15′ N) is one of the most famous Vaishnava centres of India. It stands on the Gomati creek and the massive and towering *Śikhara* of the great Dwarkadhish temple dominates the whole landscape. Its fame as a sacred centre goes back to the dim past and it was a great religious and cultural centre during the Early Medieval Period. In addition to the Dwarkadhish shrine and probably because of it, Dwarka boasts of one of the four *pīṭhas* established by Śrīmad Śāṅkarācārya.

The antiquity of the present Dwarka, as revealed through literary sources has been discussed by a large number of scholars.[1] Aerial observations, especially with reference to the legend about the submergence of the Yādava Dwarka under the sea, have also been attempted.[2] However, the existence of an habitational mound at this place was probably for the first time recognised by Dr. Jayantilal THAKAR, a reputed social worker of Dwarka. He brought it to the notice of Professor H. D. SANKALIA in a very convincing manner. He had not only seen for himself from foundation pits the existence of the remains of stone walls of earlier periods below the present town, but had also collected a large amount of pottery and other antiquities from them.

The immediate aim of the present excavation was to ascertain archaeologically the antiquity of Dwarka. It would be naïve to claim that the excavators were unmindful of the controversy in respect of the location of the original Dwarka or the Dwarka of Śrī Kṛṣṇa. A detailed discussion of this problem vis-a-vis the present excavation is to be found in Prof. SANKALIA's Introduction "Dwarka in Literature and Archaeology".

1. See 'Dwarka in Literature and Archaeology' *ante*.
2. *Ibid.*

As is made clear by him there, our excavation does not solve the problem. A similar attempt at all the other places supposed to be original Dwarkas would be the first step towards its solution. Isolation and identification of the archaeological evidence regarding the Yādavas would be the next one. In the absence of either of these, what could be done for the present is to enumerate the detailed results obtained in our limited excavation. It has shown that the earliest occupation of Dwarka can be dated back to the first-second century B.C., not earlier than that.

The excavations were a project undertaken jointly by the Deccan College, Poona, and the Department of Archaeology, Gujarat State, Rajkot. The work of excavation was conducted by the authors of this Report under the guidance of Prof. SANKALIA. They were assisted by Shri P. R. KULKARNI, Surveyor from the Deccan College; Shri V. S. LELE, Shri N. M. JOHN and Miss K. N. FRENCHMAN, all student-trainees and Shri G. N. PATHAK, Curator, Jamnagar Museum and Shri M. K. ANJARIA, Conservation Assistant, both from the Department of Archaeology, Gujarat State.

Dr. THAKAR, whose name has already appeared above, needs a special mention. It would not be too much to say that his deep study and the array of facts he presented caused a veteran archaeologist like Prof. SANKALIA to take interest in the matter and plan an excavation there. Apart from this academic initiative, Dr. THAKAR arranged to secure a plot right in the heart of the town where a dig could be taken, and helped us all through the excavations in ways too numerous to be mentioned. Shri MEHTA, the Executive Engineer at the place and Shri PANDYA, a retired engineer from the same place were helpful. Shri Pyaremohan UPADHYAYA, an enlightened young citizen of Dwarka also deserves special mention and thanks, as it was he who made available the plot in which the excavation was conducted.

Permission for excavation was kindly granted by Shri A. GHOSH, Director-General of Archaeology in India, as well as by the Government of Gujarat.

The Tata Institute of Fundamental Research, Bombay, have kindly supplied the C-14 date of the only charcoal sample that was recovered.

In addition to conducting the excavations at Dwarka proper, small-scale exploratory digs were taken at Pindara, 12 miles due east of Dwarka, by Dr. ANSARI and at Suvarna, 4 miles north-east of Dwarka, by Dr. MATE. The former was known as *Piṇḍa-tāraka-ksetra*, and was famous as a site of pilgrimage even by the eighth century,[3] while the latter is thought to be the refuge where the people of Dwarka retired in the face of tidal waves. Both sites have more or less confirmed the chronological sequence as observed at Dwarka. A thick, sturdy, black-on-red ware resembling the Kshatrapa pottery from Rangmahal and also from various sites within Saurashtra itself was recovered at both the places along with the Red Polished Ware and pieces of amphora. A detailed discussion of pottery from these two sites is under preparation and would be soon published.

Geography

The present town of Dwarka sits atop an eminence that is bounded by the Gomati creek on the south, by the sea on the west and a near continuous belt of sandstone formations on the northern and eastern sides. This is a thickly populated place with narrow streets flanked on either side by drab sandstone structures. Dwarka shares its natural surroundings with the region in which it is situated, Okhāmaṇḍala or the ancient Uṣā-maṇḍala. But for the vast expanse of the surging ocean, there is nothing attractive that nature has bestowed on this place. Trees are few and far between, and the place is surrounded by plains having scrub vegetation, especially cactus of various varieties. The whole area of Okhāmaṇḍala is in fact a dry and undiversified plain. This is a small tract of territory situated on the north-western end of the Saurashtra peninsula. A very significant feature of this area is that it is to a large extent separated from the mainland on the east and south by the Raṇ or salt-marsh. This does not totally prevent intercourse between the two, but isolates Dwarka enough to affect its history, as would be shown below.

Name

The name Okhāmaṇḍala or Uṣā-maṇḍala is supposedly derived from Uṣā, the beloved of Aniruddha, Śrī Kṛṣṇa's grandson. The story

3. For a detailed discussion of the antiquity and remains at Pindara see: SUBRAHMANYAM R., Pindara and its antiquities, *Journal of the Oriental Institute*, Baroda, Vol. XIV, Nos. 3-4, pp. 419-439, 1965.

of his elopement with her, his consequent capture and confinement by her father, Bāṇāsura, and finally his liberation and his marriage with Uṣā, are all too well known to be re-counted in any detail here. The *Bombay Gazetteer* has another explanation to offer as to how this name came about.[4] *Okhā* according to this version means bad or arid and *maṇḍala* denotes an area. Together Okhāmaṇḍala means a bad or an arid area or region. The *Gazetteer* further states that "judging from the sterility of the soil, the unpicturesqueness of its physical features and the barbarous characteristics of its former inhabitants, the term is not inappropriate." It might be pointed out here, however, that this particular term "Okhā-maṇḍala" is nowhere else used to denote an arid region anywhere in India, although such regions are not rare. The legendary association of Dwarka with the Yādavas makes the earlier explanation more acceptable.

History

No separate historical account of Dwarka as a city could be given, at least, for the earlier periods. Its history forms part and parcel of the history of Okhāmaṇḍala as a whole. Leaving aside for the time being that part which connects Dwarka with Śrī Kṛṣṇa, the Yādavas and the *Mahābhārata* period in general, a bare outline of its early history could be traced. The earliest known figure is one Sukkur Belim, 'a Syrian adventurer' who established his hold here. A popular tradition says that Dwarka was swallowed up by the sea during his reign. This did not do away with that ruler who established himself at Gorinja, a village six miles to the south-east of modern Dwarka. There is little to support this account or the long, winding narrative that the *Gazetteer* has to present further on, except perhaps bardic traditions, which are more likely to be mutilated, half-forgotten or of recent origin.[5]

Though according to the *Bombay Gazetteer*, the earliest known figure is one Sukkur Belim, a Syrian adventurer who established his hold in Okhāmaṇḍala, still as we now know, the Kshatrapas had ruled in Western India including Gujarat and Saurashtra for nearly four centuries of the Christian era. Some of their earliest inscriptions are found in Kutch and one

4. *Gazetteer of the Bombay Presidency*, Vol. VIII, Kathiawar, 586.
5. *Ibid.* pp. 587-594.

of their rulers at Mulwasar, near Dwarka. These leave little doubt that Okhāmaṇḍala was directly ruled by the Western Kshatrapas from the very beginning.

Next important rulers were the Guptas. Though we have no records like inscriptions, still Gupta coins of Saurashtra fabric are found at Dwarka and Pindara. And so before the Maitrakas the Guptas are likely to have ruled over this part of Dwarka.

The first clear historical record is dated 574 A.D., and occurs in the Palitana Plates of Sāmanta Siṁhāditya.[6] This inscription refers to Dwarka as the capital of the western coast of Saurashtra and still more important, states that Śrī Kṛṣṇa lived here. The reference clearly shows that as early as the sixth century A.D. Dwarka had come to be associated with Śrī Kṛṣṇa and the Yādavas. The *Gazetteer* account takes no note of the Varāhadāsa mentioned in this plate but describes a succession of Rajput chiefs either at Armda or at Dwarka, but as rulers of Okhāmaṇḍala itself. The next noteworthy historical reference is to be dated around 1500. About this time, Abul Fath Khan, better known as Mahmud Beghra invaded the Okhāmaṇḍala area and despoiled the entire area including Dwarka itself. This mission was ostensibly undertaken in order to suppress the pirates in this area. By 1592 another expedition organised by the Gujarat Governors of the Mughals laid the country low, only to be recovered by the turbulent Vaghers within a few years. It seems that till the beginning of the 19th century Okhāmaṇḍala maintained its independent status, often defeated but never completely subjugated. As the numismatic evidence indicates, coins of the Gujarat Sultans were current in this region. But due to its inhospitable nature and warlike population, the administration of the Sultans or the Mughals was never on a very secure basis.

In 1815 and 1816 the East India Company conquered the territory and passed it on to the Gaikwads of Baroda in full sovereignty, "as Dwarka and Bet were regarded by Hinduism as places of great sanctity and veneration."[7] The Gaikwads held the territory until the merger of Indian States with the Union.

6. *E. I.*, Vol. XI, pp. 18, 11-12.
7. *Gazetteer*, pp. 594-595.

A *couple* of facts *are* noteworthy in connection with the account of the political history of this region. First, its practically independent course; it always seems to be on the fringes of the course of events in Saurashtra, faithfully reflecting its geographical isolation pointed out earlier. The second one is the absence of any mention of this place in connection with the raid of Mahmud of Ghazni. He had destroyed and despoiled a number of shrines including the famous one at Somanath, but it seems he left Dwarka untouched. This could be either due to the Ran or the hurried retreat he had to beat across Saurashtra and Kutch to avoid any contact with the armies of Hindu confederate forces. This is not to suggest that Dwarka was immune from Muslim bigotry; it suffered especially in the 16th century.

Dwarka Kshetra

Dwarka, as a seat of Kṛṣṇa worship has found its first historical mention in 574 A.D. in the Palitana Plates of Sāmanta Siṁhāditya. As stated above, the plates mention Dvārakā as the seat of Śrī Kṛṣṇa. The establishment of one of the four of his *pīṭhas* at Dwarka by Śaṅkarāchārya[8] (beginning of the ninth century) attests to the great religious sanctity the place must have attained by the eighth century A.D. The Pratihāra Emperor Nāgabhaṭa II of Kanauj is supposed to have undertaken a pilgrimage of Saurashtra (first half of the ninth century). His itinerary included Dvārakā as well as Piṇḍa-tāraka-kshetra.[9] A very clear reference to Dvārakā as a Visṇu-*tīrtha* is to be found in the *Tīrthakalpataru* of Lakshmīdāsa (1100-1130 A.D.).[10] Tradition further records that some of the greatest spiritual leaders of India like Rāmānujāchārya (1036-1056), Jñyāneśvara (12th century A.D.) and Madhavāchārya (13th century A.D.) had visited this place.

It can be said, therefore, that Dwarka as a religious centre and more especially as a centre of Kṛṣṇa-worship goes back to the sixth century A.D. and probably earlier still. From that time onwards, to this date, it continues to be one of the most venerated centres of Hinduism.

Temple

The present shrine of Bhagawan Shri Dwarkadhish is a truly imposing pile. Rising in successive storeys and surmounted by an elegantly

8. DAVE J. H., *Immortal India*, Vol. I. 56.
9. MUNSHI K. M., *Somnath, the Shrine Eternal* (1951), 15.
10. DAVE, *op. cit.*, 55.



(a) MAHISHASURAMARDINI



(b) VISHNU—LAKSHMI



(c) SHIVA—PARVATI

Images from the courtyard of the Dwarkadhish Temple. Probably 7th-8th century A.D.

conceived *śikhara*, its origin is obscure. Tradition would ascribe its erection to Vajranābha, the great-grandson of Śrī Kṛṣṇa himself.[11] When and how it cannot be said. So also what substance the *Gazetteer* story that some Gupta king had built it contains, is difficult to verify. There certainly was a large-scale spurt of temple building in Saurashtra by the late Gupta period (7th-8th centuries A.D.). The temples at Suvana, Vasai, Pindara, all within a range of fifteen to twenty miles of Dwarka, are assigned on stylistic grounds to this particular period. But that is as far as one could go. Whether there was a temple of Śrī Kṛṣṇa at Dwarka at this time is to be determined not by architectural remains but by epigraphical evidence, the former being absent. The latter, the Palitana Plates indicate that there must have been a shrine dedicated to Śrī Kṛṣṇa in the sixth century.

The shrine as found today defies any attempt at dating it on purely stylistic grounds. The alterations and modifications that have taken place, especially during the 16th century and onwards, have changed the face of the walls, although the plan and generally the elevation also seems to have remained undisturbed. These may go back to the 13th or 14th centuries or be as late as the 18th century.

Another structure of great antiquarian interest is the Rukmini temple on the northern outskirts of the town. This small but most elegantly modelled and profusely sculptured structure might belong to the 12th-13th centuries, though not earlier.

A few sculptures now placed in niches around the courtyard wall of the Dwarkadhish temple have been assigned to a still earlier date (8th century A.D.) by Prof. SANKALIA and Shri NANAVATI, mainly on stylistic grounds. (Plate I).

The temple stands on the highest level of the habitation mound on which the town is located. Enclosed within a huge courtyard which contains several temples as well as the Śāradāpīṭha *Maṭha* of *Śrī* Śaṅkarāchārya, the temple occupies an area of 100′×40′. A remarkable absence in the structure is the high pedestal or *adhiṣṭhāna*, which happens to be an universally prevalent feature in the temples of this style. The floor of the temple is on the same level as the pavement of the courtyard. This

11. *Gazetteer*, p. 601.

absence, however, must be more apparent than real, the most likely explanation being that surrounding areas got filled up to as much as two metres or more in course of time. A cut, away from the temple walls, would in all probability expose such a deposit. Any way, as the shrine is seen today, it is without an *adhishṭhāna*. The plan consists of a *garbhagṛha*, an *antarāla* and a *maṇḍapa*. The *maṇḍapa* is open on all sides and rises to five storeys and has sixty pillars to support them. It is roofed over by a *saṁvaraṇā*, a conical roof with numerous bell-shaped domes as its constituents. The main shrine or *garbhagṛha* has an enclosed *pradakshiṇā-patha* around it. The whole is surmounted by a tall graceful *śikhara* crowned by an *āmalaka* and a *kalaśa*. It is 140′ in height. The interior, especially the pillars and beams, bear no decoration worth the name and the exterior is generally speaking quite plain. However, there are remains, within the walls themselves, of highly decorated portions, which belong to an earlier structure that was not so plain as the present one.

An excellent idea of the location of the temple, especially the height of the mound it stands upon, could be had when one goes to the temple from the side of the Gomati river. An impressive flight of more than fifty steps leads up to the courtyard of the temple. (Frontispiece).

II

EXCAVATIONS

Site

The actual excavations were conducted in a plot obtained for the purpose after demolishing the old dilapidated structure standing there. The latter belongs to Shri Pyaremohan Madanji UPADHYAYA (Ward, Gomati; House No. 995/996). It lies to the south side and practically immediately outside the walls encircling the temple. It is located within the highest part of the town. (*Plate II*, a; *Figure* 2).

Since the plot and the excavated trench were hemmed in by solid stone structures two to three storeys high, elaborate precautions had to be taken to ensure the safety of both, the trench with its excavators and the houses surrounding them. This was initially secured by leaving an offset of 1.50 m. all round. On reaching the sand layer (depth 3.60 m.) which by its very nature was loose, and hence would not permit the maintenance of any sections, a strong timber boxing was lowered in the eastern side of the trench, to cover an area of 4 m.×4 m. At a depth of 6.50 m. an offset of 30 cms. was left thus contracting the area excavated.

Chronological Sequence

The chronological sequence of the various layers is fixed mainly on a comparative analysis of the antiquities they yielded. Definite evidence in the nature of coins was absent except in Period IV. Only one charcoal sample was useful for C-14 dating, the other samples were either too limited in quantity or too moist to serve any useful purpose. The Tata Institute of Fundamental Research, Bombay have assigned the following date to the sample which comes from Layer 3, TF 173, 310±90, i.e. 1640±90 A.D. This tallies well with the archaeological dating, as shown below.

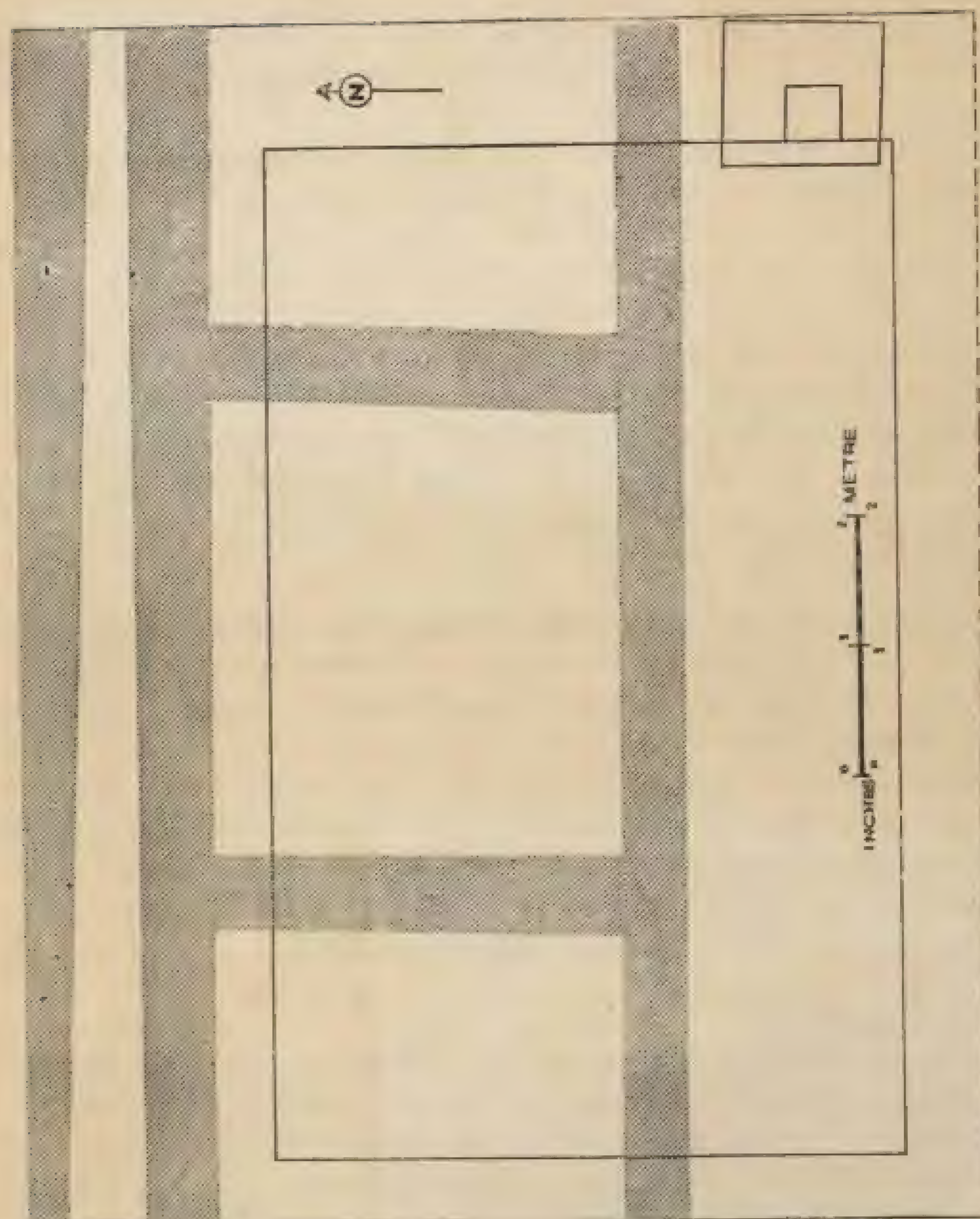


Fig. 2. Plan of Site (Hatched portion shows foundation of modern structure. Inner rectangle shows the area excavated. The small square in the right hand lower corner is a water tank.)

PLATE V



Structure 4



Structure 5



Āmalaka of the Uruśṛṅga



Moulded stones from the Pitha

Moulded stones from foundation of Structure 2

Plate III



Structure 2



Structure 3

PLATE II



Arrow shows house where the excavations were conducted. In the forefront are the temple walls.



Structure I

The excavations revealed the existence of four periods reaching back to the first-second centuries B.C.

PERIOD I

This is represented by a layer of sea-sand five metres thick. Besides potsherds of painted pottery this gave fragments of terracotta balls and stoppers, shells, shell-bangles and also a piece of iron. The layer would be dated to the first-second centuries B.C. This date is fixed mainly on its being anterior to the layer containing Red Polished Ware. Layer 7 forms Period I.

PERIOD II

This again is a layer of sea-sand 2.55 m. in thickness. Along with a large quantity of pottery, this period has given the remains of the earliest habitation. The association of the R.P.W. and more especially the amphoras in the layers forming this Period indicate its date as being the first four centuries of the Christian Era, during which period the whole of India, especially the Western Coast was in commercial contact with the Mediterranean world, where R.P.W. was commonly used, and amphora was used mainly for exporting wine and olive oil.

PERIOD III

This period gives evidence of successive superimposed structures, all not too far apart from each other in respect of time. The foundation of the earliest of these structures have given, as noted later on, certain sculptured pieces of stone (*Plate IV*). These are apparently parts of a temple. They bear a close resemblance to the mouldings of the seventh-eighth centuries A.D. temples in this area. The total absence of polychrome glass bangles from Layer 4, forming this period, marks it out as a distinct period from the later one.

PERIOD IV

Period IV has three features that are of consequence in any discussion on chronology. First come coins, which all belong to the Gujarat Sultans. Second are polychrome glass bangles and last, Glazed Ware. All these are absent from the earlier layers, and are associated with the Muslim period. Especially the last two are taken to be items introduced by Iranian Muslims in India. In view of the nearness of the Sind coast to this area, it would not at all be improbable that these features arrived here earlier

than the interior parts of India. Hence, a beginning date of the tenth century A.D. is suggested. This period does not indicate the beginnings of Muslim rule over Okhamaṇḍala, but merely indicates the cultural contact, mainly commercial, with the Islamic world. Period IV with its three structural phases continues right up to the modern times, which would be Period V.

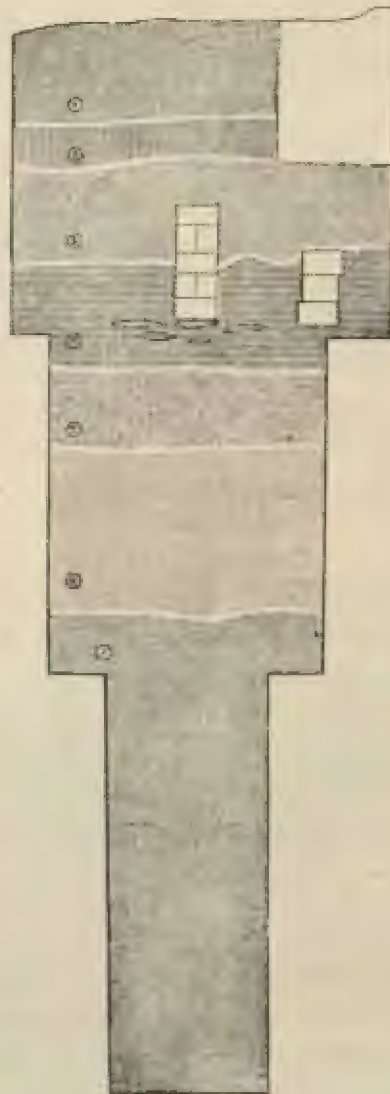


FIG. 3. Section facing West (Scale 1 ' = 2 metres). Blank portion in the right hand corner shows water tank.

Stratification , (See Fig. 3)

It has to be made clear at the outset that the first three layers were disturbed due to the constant cutting of foundations during the last two hundred years.

LAYER 1

Period IV (Phase 2). Loose dark-black soil mixed with ash and lime-mortar. It contained small chips of stone and pebbles, perhaps forming the bedding, given to the successive floorings. Pottery from this layer is mostly fragmentary and consists of a red ware, a black ware and a few pieces of Glazed Ware.

LAYER 2

Period IV (Phase 2). This layer is slightly more compact than Layer 1 and is more whitish mainly on account of greater mixture of ash it contains. Pottery similar to Layer 1.

LAYER 3

Period IV (Phase 1). The earth is quite compact and dark-brown. Pottery in this layer is better preserved and many recognisable shapes were discovered. This layer has got the largest concentration of polychrome glass bangles and beads. Structure 5 belongs to this layer and it seals Structure 4 that belongs to Period III.

LAYER 4

Period III. The earth is reddish, contains more of red pottery than black, although the latter is by no means absent. The lower portions of this layer yielded, at places, a large amount of stone chips and pebbles that were apparently used as a filling by people of Structures 4, 3 and 2, as in Layer 1. Structures 2, 3 and 4 belong to this layer.

LAYER 5

Period II. Sealed by the huge stone bedding and chip debris belonging to Structure 2. It consists of fine sea-sand of dark-blackish colour.

LAYER 6

Period II. Fine sea-sand yellowish in colour. The Red Polished Ware and pieces of amphoras occur along with other fragmentary pottery.



FIG. 4. Plan of Structure I (Scale 1" = 50 cms.)

LAYER 7

Period I. Fine sea-sand of yellow colour. No R.P.W. occurs here. Comminuted and often rolled pottery occurs. This layer is sealed by Structure 1 and itself rests on bed-rock.

Structures (Described bottom upwards)

PERIOD I (Layer 7) Nil.

PERIOD II (Layers 5 and 6).

Structure 1 (Plate II, Fig. 4).

Depth from top 6.10 metres. Two parallel and well-laid stone alignments resting directly on sand forming Layer 7. Both run in an east-west direction, the distance between the two being about one metre (1.10 m. to 1 m.). The northern wall is 1.50 m. long and is 25 cms. thick. It consists of a single course of thin, long stones with rubble filling and a reddish clay as cementing material. At a distance of half a metre towards the west of this alignment is a group of stones lying without any order and apparently having no connection with it. The southern alignment is 45 cms. broad and is slightly more in length than the northern one. It has two courses of stones with the same red clay as cementing material.

The walls, if they might be called so, seemed to continue in the eastern section. No precise plan can be made out of these alignments, however, they might have formed a foundation layer for the walls of a temporary wattle and daub hut.

PERIOD III (Layer 4)

It would be clear from the following description that it was not possible to get the complete plan of any one structure. The trench uncovered a number of walls adjacent to or crossing each other, but it cannot be said with certainty that they belonged to a single house. It would be more logical to assume that the excavated trench covered an area where two or three houses met each other. It touched small portions of two or three adjacent houses. Although such obvious features like the directions of the walls, the materials used for their construction etc. could be described, nothing about the overall plan of a house could be said.

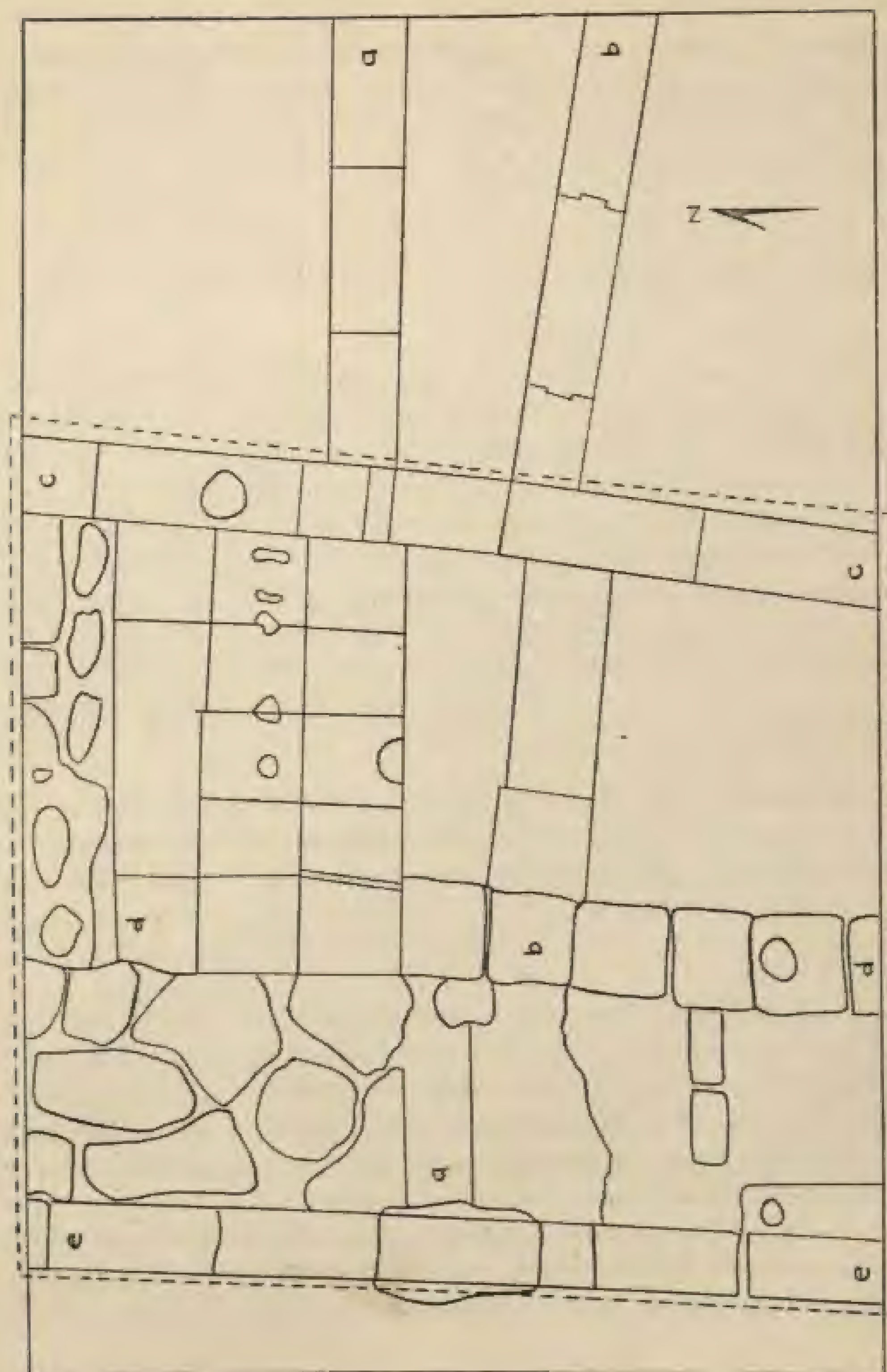


FIG. 5. Plan of Structure 2 (Scale 1" = 1 metre)

Structure 2. (Plate III, Fig. 5).

Depth 3.30 m. Lowest course at a depth of 3.30 m. At a depth of 3 m. a bed of huge flat stone slabs uncovered in area marked in dotted lines in Fig. 5. Some of these stones are visible in the north-western corner of the same plan.

The main feature of this complex is a set of five walls, two running in an east-west direction and three across them in a north-south fashion. These walls are not parallel to each other and do not cross each other at right angles.

Walls *e* and *c* are the most regular in alignment. They are constructed of huge blocks (generally 1 m. × 40 cms. × 20 cms.) of the yellowish sandstone locally available and used todate. Wall *d* is formed of squarish blocks of 60 cms. × 5 cms. × 20 cms. The two lowermost courses of wall *c* have utilized stones of a notable character. These are sculptured stones and should have or actually did form parts of a temple structure. There were two slabs with the *padma* or *cyma reversa* mouldings (Plate IV) along with the inevitable *caityatoraṅa* motifs, and a partially completed *āmalaka* meant for an *uruśṛnga*. These stones could have come here either from a fallen or a demolished temple or could be a refuse from some contemporary temple construction.

Walls *a* and *b* have rectangular slabs similar to those of *c* and *e*.

The portion *a*—*e*—*c*, that is, the northern half of the dotted area, had a solidly built platform of the same kind and size of stones as used for wall *d*.

Structure 3 (Plate III, Fig. 6).

Depth 2.90 m. This structure along with Structure 4 is superimposed on Structure 2 and is more or less a continuation of the same plan, of course, with certain additions and alterations.

As would be evident from plan on Figure 6, walls *a* and *b* continue to exist as in Structure 2, but are more visible to the east of wall *c*. Wall *a* continues westwards of this line, but its relation to the surrounding complex is not clear. Wall *c* is obviously the enclosing wall. Wall *e* has become slightly irregular and wall *d* has no role to play. In fact, it is altogether obliterated at this stage.



FIG. 6. Plan of Structure 3 (Scale 1" = 1 metre)

The entire dotted area (Fig. 6) is now covered with regular, dressed blocks of sandstone to form a firm pavement or flooring. The small depressions in wall *c* and the stones adjacent to it might be mortars.

Structure 4 (Plate V, Fig. 7).

Depth 2.60 m. Here wall *a* is extant, but wall *b* is curtailed, starting eastwards from *c* it turns at right angles to meet *a* (Fig. 7). The small square so formed might have been used as a garbage pit (a large number of chicken-bones, fragmentary shell pieces etc. were recovered from this pit). To the west of *c* two factors are noteworthy. Wall *d* is never resurrected, and wall *e* becomes more irregular, but walls *a* and *b* become prominent by being raised by two courses. They do not rest on the stone pavement directly, but have a pebble and clay bedding. In wall *b* two raised blocks are seen, with mortice holes in which a doorframe could be fitted. If this was a door, it could have served as an entrance only to the southern half of the dotted area.

The uniformity of the stone platform is now lost. Although blocks of the earlier (Structure 3) fashion are seen at places there are various patches made up of smaller undressed stones and even pebbles.

This structure marks the last rejuvenation of Structure Number 2.

As mentioned earlier, it was not possible to mark out complete houses or even rooms in Period III. The walls noted above would not give any idea of a plan of a complete house.

Period IV (Layers 1, 2 and 3)

Structure 5 (Plate V, Fig. 8).

Depth 1.60 m. This structure marks the last but one phase (the last being the modern one) of building activity at this spot. The plan as obtained at this depth (1.60 m.) consists of two walls running east-west and two going across them, that is, in the north-south direction. A distance of 50 cms. divides the east-west walls and no relationship is available between the two (Fig. 8).

At a distance of two metres from the western section a wall projects southwards from wall *B*. Then comes a gap of about 75 cms. The further continuation of *B* has also a southward projecting wall.



FIG. 7. Plan of Structure 4 (Scale 1" = 1 metre)

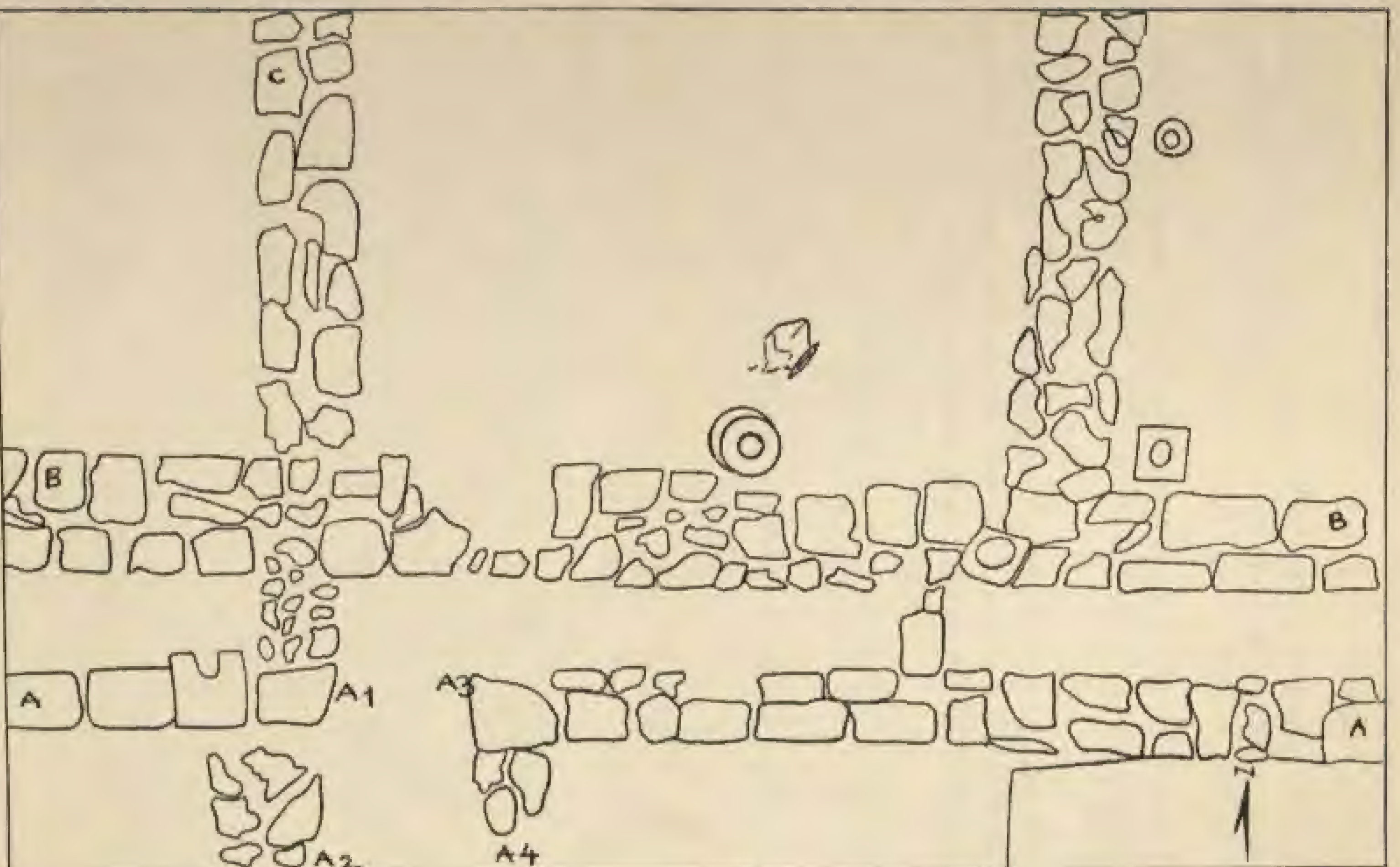


FIG. 8. Plan of Structure 5 (Scale 1" = 1 metre)

Wall *A* is fairly uniform and continuous. Walls *C* and *D* project from this wall to the north.

It could be pointed out that areas to the north of *A* could have belonged to one house, forming three rooms that are only partially visible. Portion A-A^1-A^2 marks one house and A-A^3-A^4 another house.

These walls were built of irregular and rough stones of all available sizes, and had used red clay for a cement. They are from 45 cms. to 30 cms. in thickness.

The last or latest structure belongs to the present century. This was the house that was pulled down to clear the site for digging. Fig. 2 shows the lay-out of the house on the present ground level.

III

ANTIQUITIES

Amulets (Fig. 9).

PERIOD IV

1. Cylindrical with rounded caps on either side. Two ring attachments for suspension. It is made of copper. No. 145 (1).

2. This is a rectangular piece with one end rounded. It has a triangular section, in other words it is wedge-shaped. There is a hole near the rounded part, the other side is a sharp edge. Ivory. No. 130 (3).

3. Bead or amulet. Pentagonal with faceted corners. Double perforations, banded carnelian. No. 190(3).

Beads (Fig. 9).

Terracotta

Period I

1. Wheel-made, arecanut bead of a regular shape. Well-baked. This is the only wheel-made and regularly-shaped bead. No. 243(7). Not illustrated.

Period IV

1. Handmade. Terracotta beads or spindle-whorls of irregular shape and size. In all 15 were found at one place. Of these fourteen are well-baked, one is ill-fired. Twelve of them approximate the arecanut shape, one is flattish, two are completely irregular. Their use as net-sinkers as recently suggested cannot be excluded from the realms of possibility. No. 104 (2), (Plate VI).

2. Seven handmade, irregular beads were recovered from Layer 3. Nos. 24, 121, 122, 123, 140, 166, 179. Not illustrated.

Shell

Period IV

1. Flat disc. Irregular. No. 94(2).

2. Short barrel. No. 184 (3).

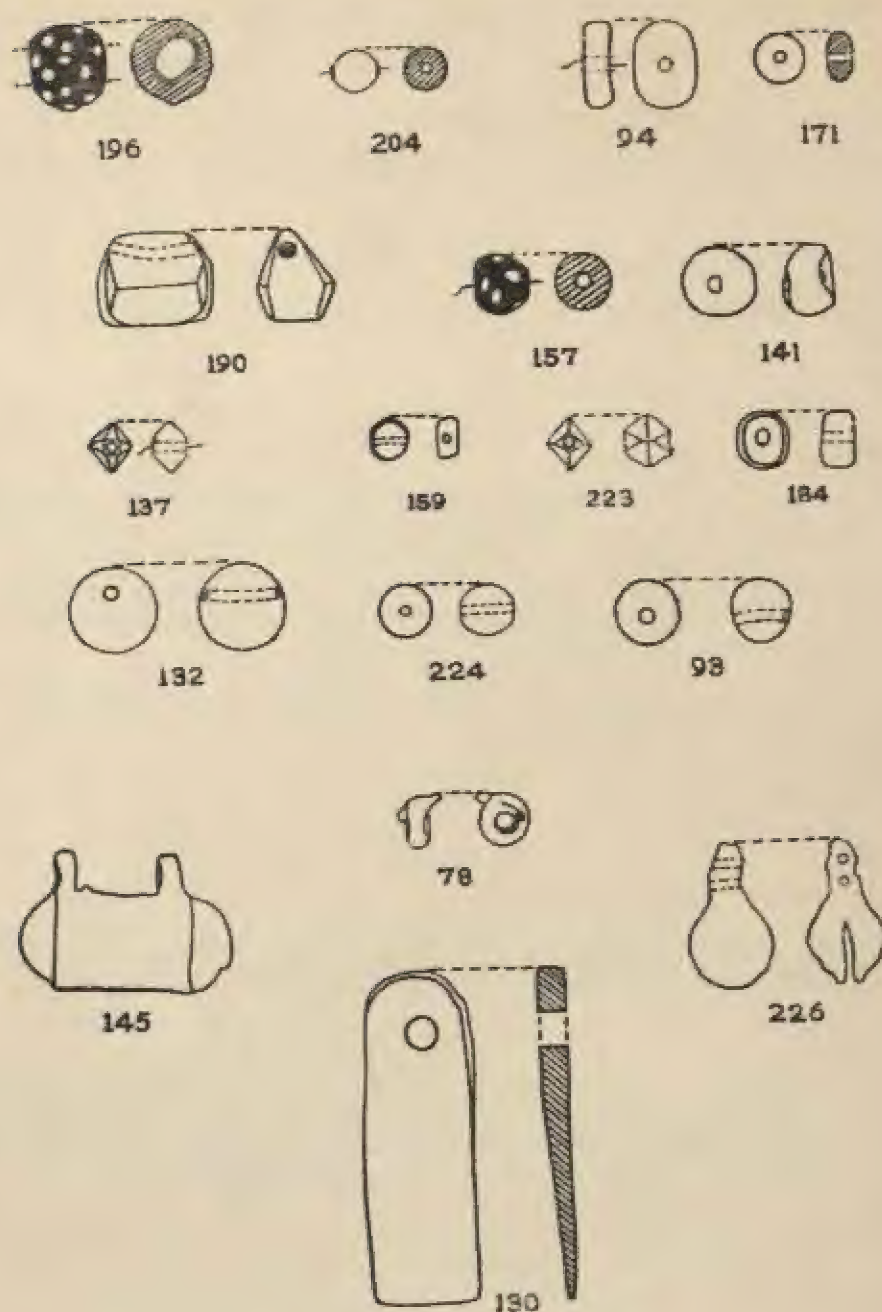


FIG. 9. Amulets, Beads

Stone

Period IV

1. Globular, slightly irregular in shape, double-perforation. Carnelian (banded). No. 93(1).
2. Globular, chalcedony. No. 132(3).
3. Irregular, short-oblate. Coral No. 141(3).
4. Tabular with double perforation. Carnelian. No.159(3).
5. Globular. Some flakes removed in an apparent attempt at faceting the bead. Carnelian. No. 170 (3). Not illustrated.

Glass

Period III

1. Globular, opaque. Purple. No. 204(4).
2. Globular, transparent. White. No. 224(4).
3. Truncated hexagonal,faceted. Transparent. Pale shade of Persian blue. No. 223(4).
4. Same as No. 223(4). Not illustrated.

Period IV

1. Annular wound bead with ends loose. Opaque to semi-opaque. *Sap* green with white bands. No. 78(3).
2. Faceted, hexagonal, semi-transparent, scarlet in colour. No. 137(3).
3. Eye-bead. Barrel-shaped, flush white spots spirally arranged on a black background, opaque. No. 157(3).
4. Short oblate, opaque, turquoise blue. No. 171(3).
5. Eye-bead. Barrel-shaped, raised spots in white spirally arranged on a black background. Opaque. No. 196(3).

Kohl Stick (Fig. 10).

Period IV

Broken piece of black cane-glass. One end tapering and smooth. Length 43 cm. Lower end broken. No 148(1).

Bangles (Fig. 10 and Plate VII c).

Polychrome Glass Bangles

Although glass and glass technology were known in India from a much earlier period, evidence for the manufacture and use of polychrome

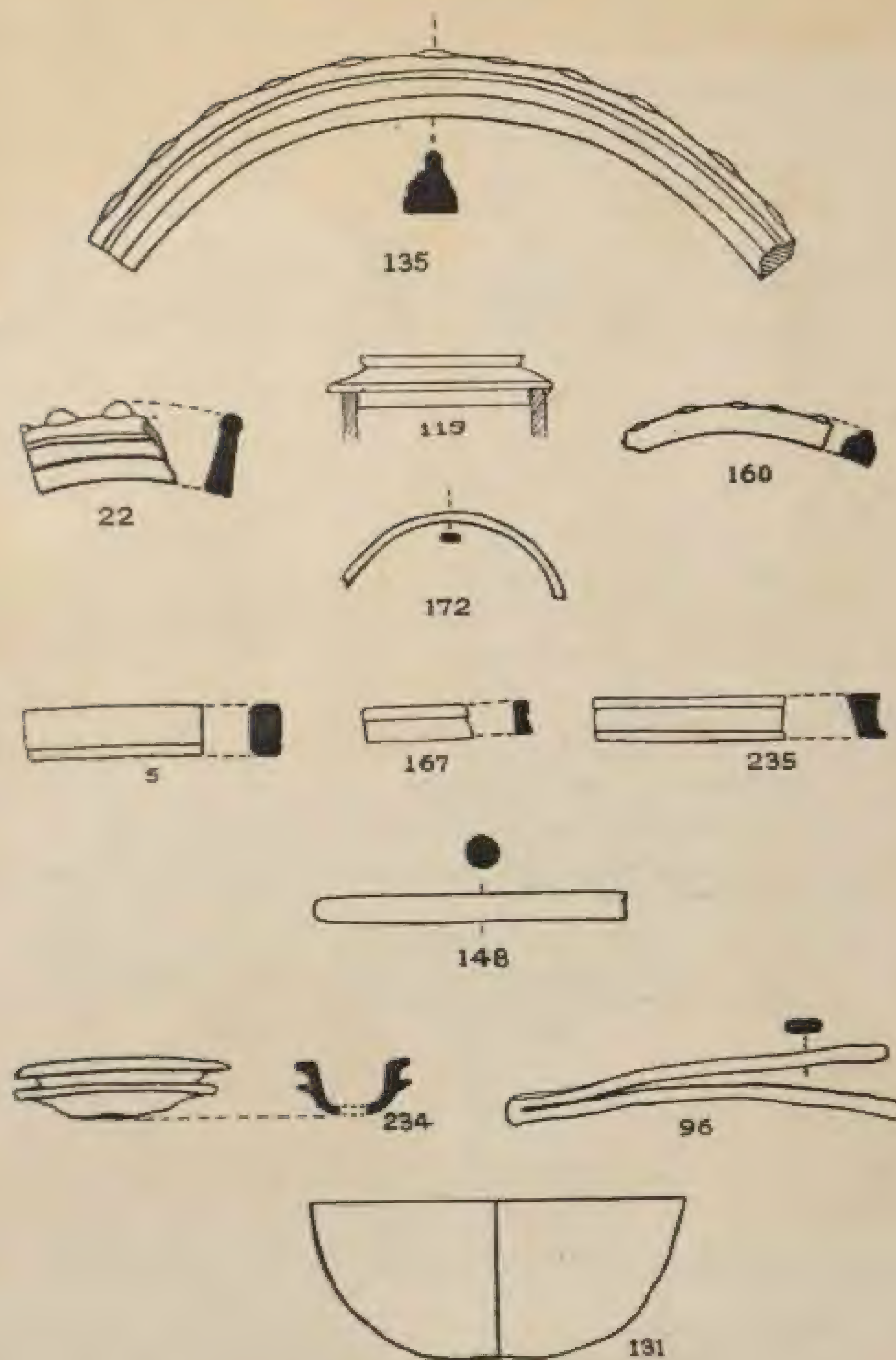
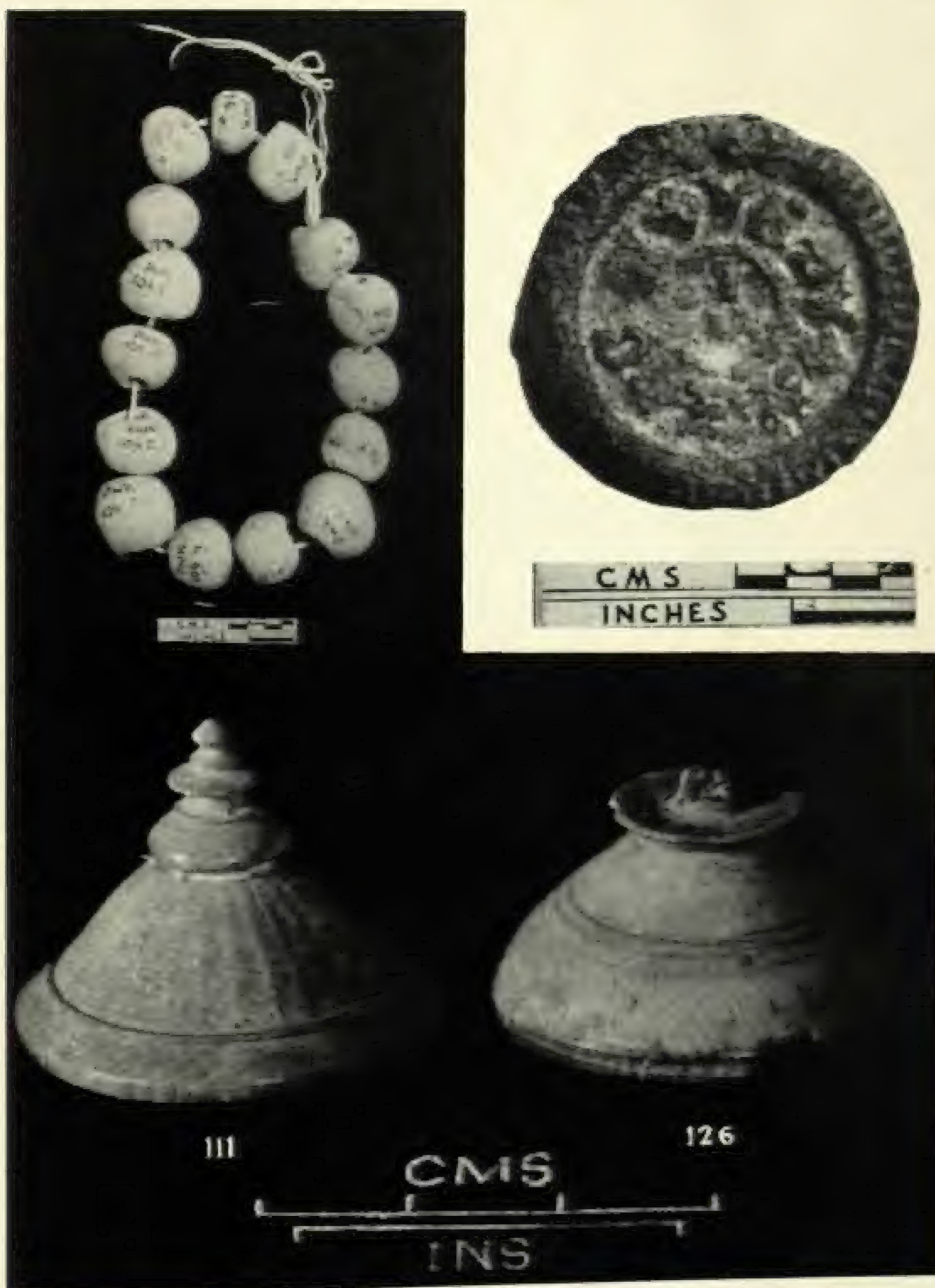


FIG. 10. Glass and Shell Bangles, and Metal objects.



(a) Terracotta Beads, (b) Iron weight and (c) Ivory Lids





(a) Glazed Ware Bowl; (b) Terracotta amulet No. 248, and (c) Glass Bangle No. 135.

glass and objects like bangles from that glass are usually assigned to the Muslim period. Along with the technique of manufacturing Glazed Ware, manufacture of polychrome glass is also an innovation introduced by the Muslims. As hinted in the section on chronology, introduction of these features could be much earlier along the Western coast in general and Saurashtra in particular. Its proximity with Sind with which it had cultural and commercial contacts indicates a strong possibility of polychrome glass coming to this region by as much as one or two centuries earlier than the rest of India. All specimens of polychrome glass bangles occur in Period IV comprising of Layers 1, 2 and 3.

Period IV

1. Bangle with a rectangular section and beaded outer surface. The colour is permanent yellow with streaks of white. The beads are white. Dia. 74mm. No. 22(1).
2. Plain, rectangular section of deep Persian blue. Dia. 52mm. No. 76(2). Not illustrated.
3. Bangle with a triangular section and beaded rim. Colour is deep Persian blue with the elongated beads in yellow. Three grooves run on one side. This is a very large bangle and is not meant for the forearm, but is used on the upper arm. It is popularly known as *Chuda*. Dia. 120mm. No. 135(3).
4. Beaded with rectangular section. Lower or inner half is blue-black, the outer half being brick-red. Beads are yellow and white alternately.
   No. 160(3). No. 181(3) is the same as 160.
5. Beaded. Roughly triangular in section with a ridge on the inner side. Colour is lemon yellow with streaks of green. No. 183(3). Not illustrated.

Ivory or Shell bangles

Period II

1. *Patali* type bangle. Rectangular section. Flat band with raised ridges on either side, Dia. 52mm. Material: Conch. No. 235(6).

Period IV

1. *Patali* type with a flat rectangular section. There is an incised line or groove on one side. Dia. 48mm. Material: Conch. No. 5(2).
2. Flat, rectangular section. Incised line in the centre with small holes meant for a pin or screw to hold an applique band. Dia. 88mm. Material: Ivory. No. 167(3).
3. Flat, rectangular section. Dia. 40mm. Ivory. No. 220(3). Not illustrated.

Ivory Objects (Plate VI and Fig. 10).

A number of ivory lids of very graceful shapes have been found in the excavations. However, no container or bottle could be found. All are bell-shaped with or without a knob. (Also see under Bangles.)

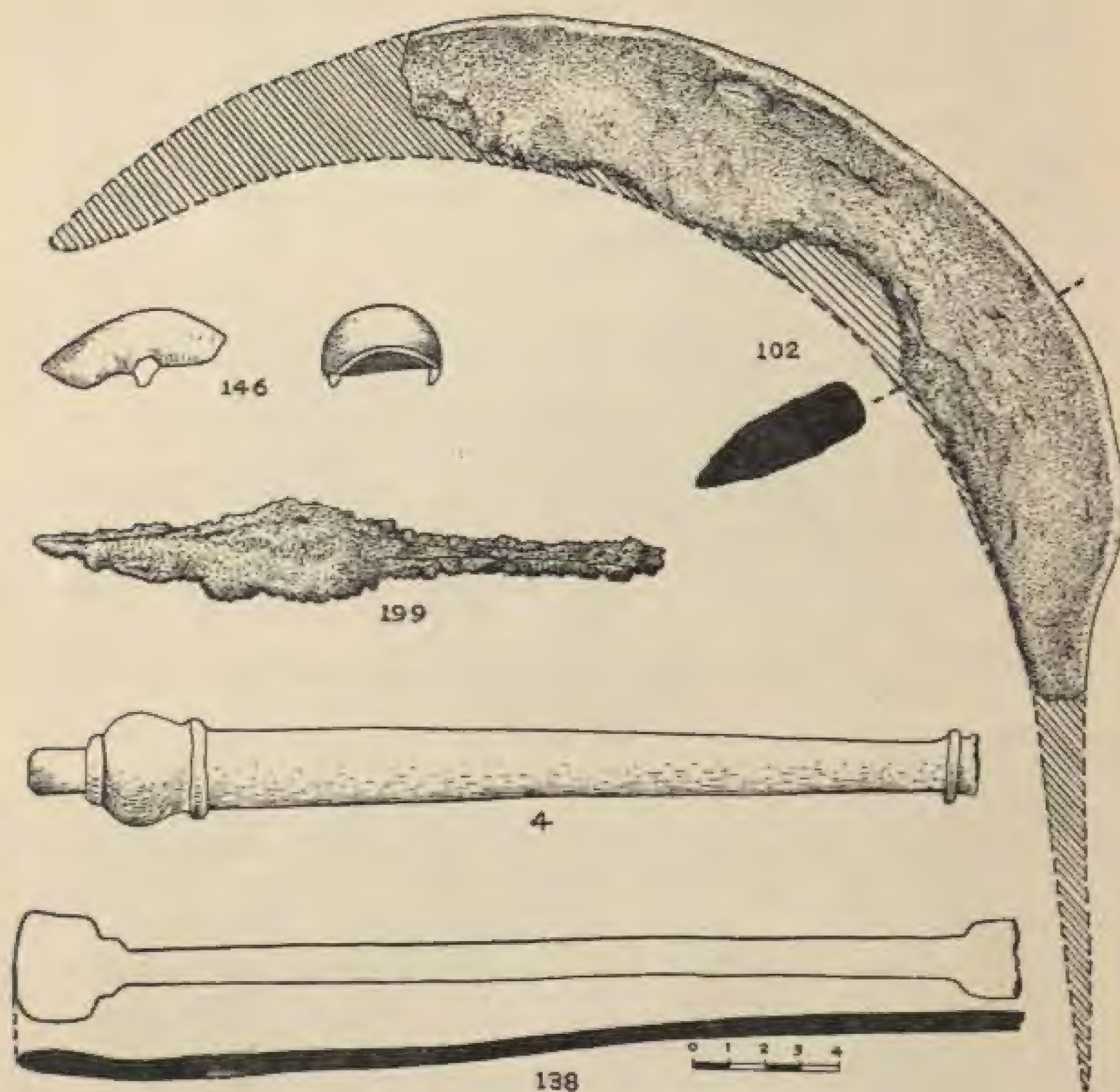


FIG. 11. Metal Objects

Period IV

1. Lid. This is a complete specimen with a "*padma*" or *cyma recta* outline. It has an elaborate finial having a miniature replica of the *āmalaka-stone* and a *Kalasa*. The lid would fit around the mouth of the container. Decoration consists of two incised rings and facets on the curved portion. Probably turned on a lathe. No. 111(2). Plate VI, c.

2. This lid would, unlike the first one, fit in the mouth of the container. Above this cylindrical portion that goes in the casket is a cornice-like projection to rest over the mouth of the casket. On the top of the bell-shaped body is a flat, slightly projecting disc to serve as a knob. No. 115(2), Fig. 10.

3. These two are similar in every respect to No. 111, except the bigger size of No.126 and the smaller size of No. 128. 128 is not illustrated.

The first three periods do not give any ivory object.

Metal Objects (Figs. 9, 10 and 11).

Silver

Period IV

1. Hairpin of folded silver strip 55mm. in length. No. 96(2).

2. Unidentified object. Perhaps forms part of some ornament. A shell-shaped hollow piece with two brass attachments welded to it on either side. No. 146(1).

Brass

Period IV

1. Handle or stem of a bell or a lamp. Clear file marks are seen. It has a round knob at the upper end. No. 4(1).

2. Bowl. Thin walled, heavily corroded and fragile. Contains large amount of zinc. No. 131(1).

Copper

Period I

1. Washer or a disc used for wooden seats or swings. There are two of them stuck together; are oblong and convex in section with a hole in the centre. These might very well be head-scratchers although most head-scratchers till now noticed are either of shell or of terracotta, i. e. prepared out of potsherds. No. 234(7).

Period IV

1. Ring with open ends. Thickness of the wire is 3mm. No. 116(1). Not illustrated.

2. Turning shovel, upper part broken. 28cms. in length. No. 138(1).

3. Lid of a casket. In a fragmentary condition with corrugations for decorations. No. 169(3). Not illustrated.

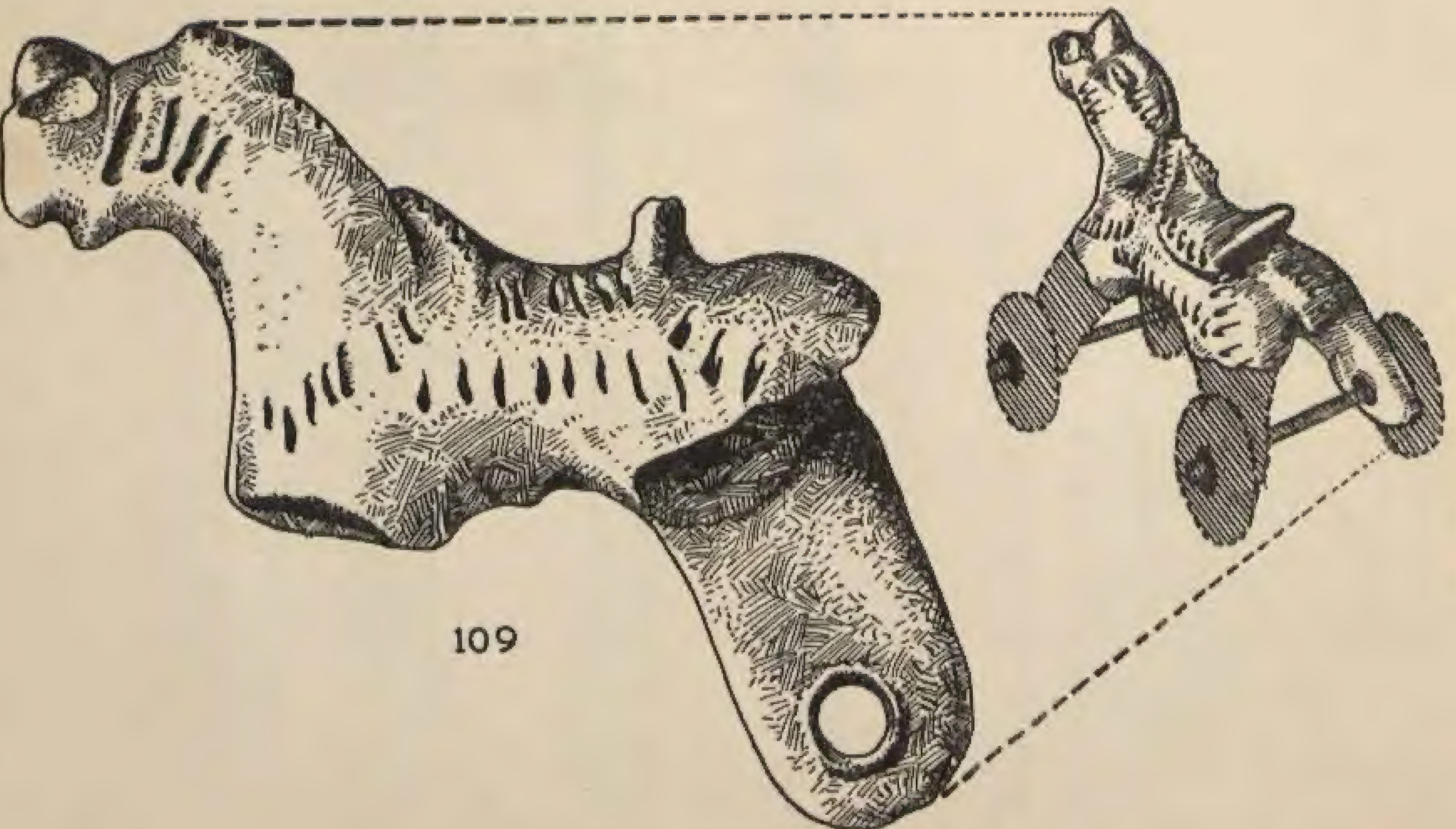


FIG. 12. Terracotta Toy Horse. Figure in the right upper-hand corner shows the reconstruction.



FIG. 13. Terracotta objects

Bronze

Period III

1. Jingle bell with two holes for suspension on. No. 226(4).

Iron

Period IV

1. Semicircular flat object with a rounded ball-like end on one side and a flattened one on another. This could be a corroded part of an axe or an adze. No. 19(2). Not illustrated.
2. Weight, Legend in Roman characters illegible. Corroded. Dia. 40mm. Thickness 9mm. Weight 59gms. No. 80(2). (Plate VI).
3. Blade, thin and tapering, perhaps of a knife. No. 101(3). Not illustrated.
4. Sickle, fragmentary. Its outer edge is thick, inner one is sharper. Length between the tips 132ms. No. 102(3).
5. Folded iron sheet with one end flat and sharp. It could be a poker. No. 185(3). Not illustrated.
6. Arrowhead. Tang slightly broken. Square in section. No. 199(3).

Terracotta Objects

A large number of terracotta objects consisting of toys, beads, stoppers etc. have come out. Period III has the least number, Period I comes next, while Period IV has the largest number. (Figures 12 and 13)

Period I

1. Stopper. Cylindrical with ridged or beaded top. No. 239(7).
2. Fragmentary terracotta ball. No. 240(7). Not illustrated.
3. Stopper. Irregular in shape. No. 241(7). Not illustrated.
4. Stopper. Short, thick, smooth and well-made. Colour is black. No. 242(7). Not illustrated.

Period III

1. Tile fragment. Has a groove made by finger-tips as water channels and a raised or ridged side. No. 218(4). Not illustrated.
2. Bottle, with concave neck and a ridged shoulder. Holes in the wall for suspension with strings. Handmade, uneven but smooth surface and has a grey slip. Height 55mm. diameter is 26mm. No. 206(4).

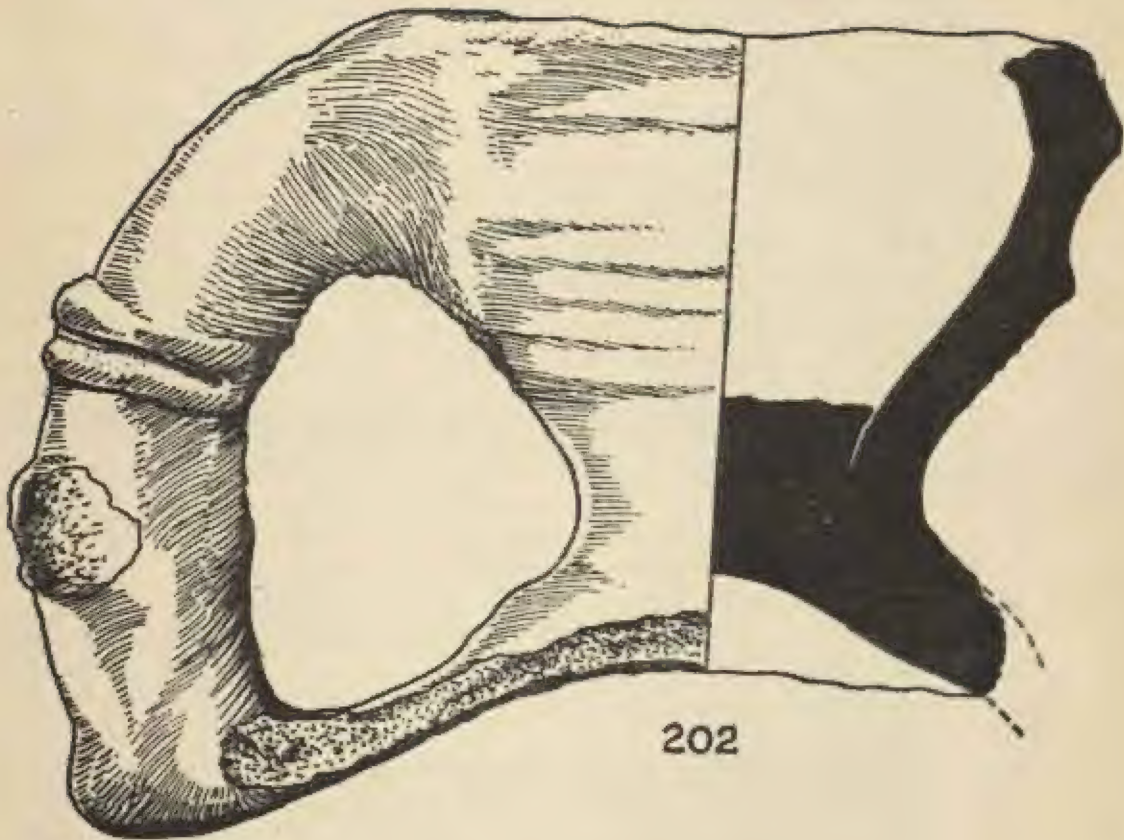


FIG. 14. Incense Burner

Period IV

1. Fragment of a toy animal: Only the hind portion remains. Not illustrated.
2. Disc with a convex section, most probably due to its being fashioned out of a pot-sherd. It is irregular in shape and has a hole in the centre, and could have been used either as a wheel for a toy cart or for a spindle. No. 16(2).
3. Wheel, irregular in shape and form. The edge of the central hole is ridged and the outer side is slightly convex. No. 25(3).
4. Stand with a broad base but a small rest. It is hollow from within, has a red slip over it and has punctured lines arranged in a spiral manner on the outer surface. No. 53(3).
5. Fragment of a toy cart. This is a flattish strip with sharp bend upwards. Immediately near to it are lugs on either side to hold the axle for the wheels. Decoration consists of cord-impressions and incised strokes on the upper surface. Has a red slip. No. 89(2).
6. Socket lug of a toy cart similar to No. 89. No. 91(2). Not illustrated.
7. A toy horse. The torso with one leg, the neck and the upper part of the head remains. The lower part of the head and three legs broken off. Body is in full round with flat, broad legs with rounded ends. The lower tips of the legs have perforations for wheel-axles. Legs flare outwards from the body to give it better balance. There is an ornate saddle on the back. The whole is well-modelled but especially the curve of the neck is very graceful. The underside (belly-portion) retains traces of white colour, so do the strappings that were painted in golden colour. No. 109(3). Plate VIII.
8. Figure of a bull. Only the torso with a hump and the neck portions remain. The piece is more noteworthy on account of its applique strappings and decorations. The toy has a red slip over it. No. 110(2).
9. Same as No. 91. No. 152(3).
10. Fragment of a toy cart. Tapering, bent projection with three perforations. The tip of this bent part is to rest on the ground. The holes in the horizontal face are meant for inserting sticks in imitation of present day bullock-carts used in this region. No. 156(3).
11. Tile fragment has a groove made by finger-tips as water channels and a raised or ridged side. No. 118(3). (Not illustrated.)
12. Skin-rubber. A squarish cake of over-burnt clay (Khangar) with porous surface. Its size is 58mm × 54mm × 23mm. In spite of the porous surface, the rubber is smooth unlike the rubbers that have punctured surfaces. No. 194(3).

Plaque (Surface, probably modern).

Fragment of a very thin rectangular plaque. It has a hole in the centre, meant for suspension and has one footprint in low relief, and all round is a beaded border, also in low relief. This seems to be half the portion of an amulet that had a pair of footprints on it. No. 248. Plate VIII, b.

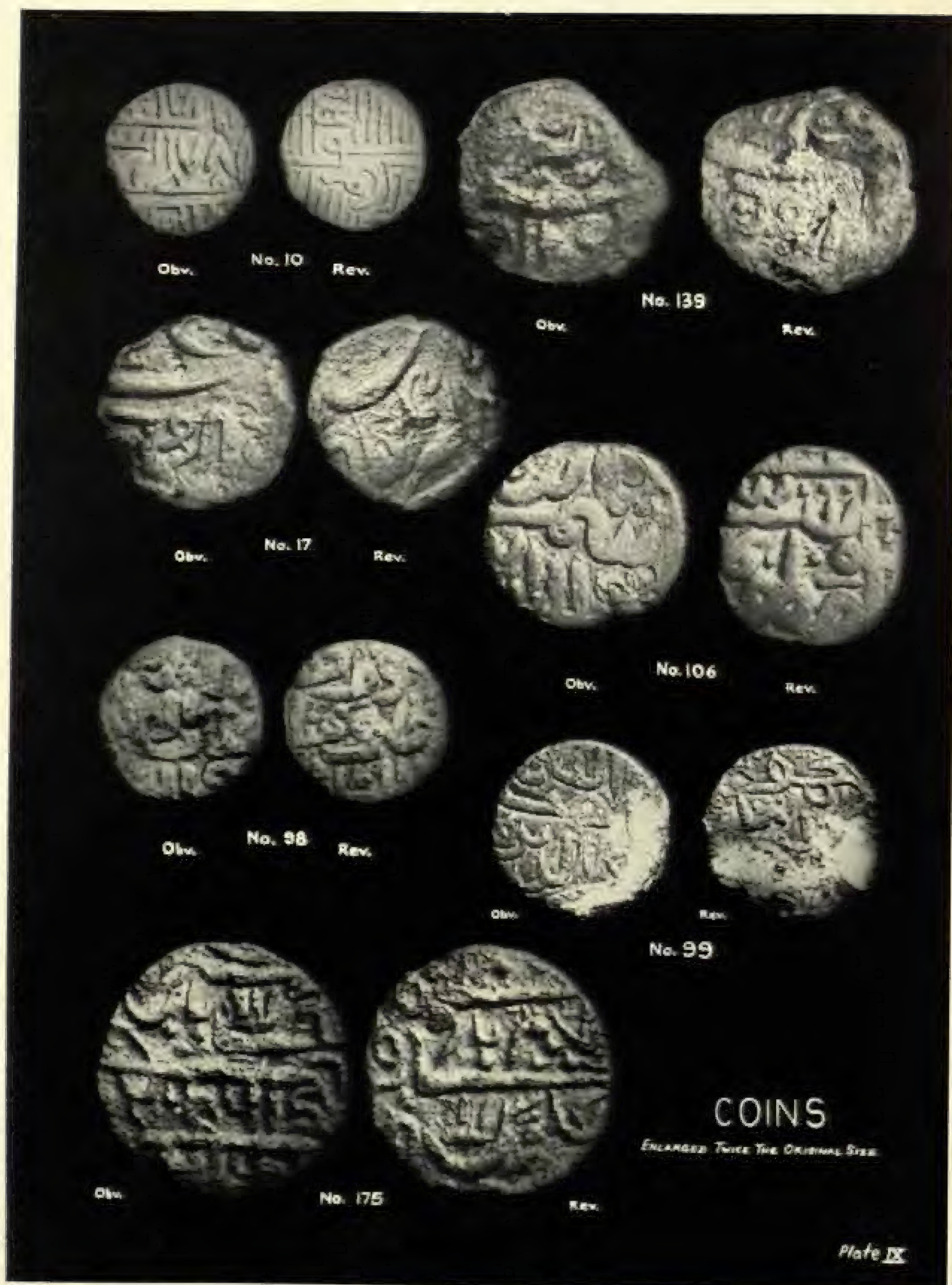
PLATE VIII



Terracotta Horse No. 109



Terracotta Horse (another view)



NOTE: *The photograph of the Reverse of coin No. 10 has been pasted upside down by mistake.*

IV

COINS

This section is prepared by Professor G. H. KHARE of the Bharata Itihasa Samshodhaka Mandal, Poona. The coins were cleaned and chemically treated by Dr. G. G. MUJUMDAR, Lecturer in Archaeological Chemistry, Department of Archaeology, University of Poona. We record our thanks to our colleague and to Prof. KHARE for his help.

—*Authors*

In all there are seventeen coins from the first three layers, *i. e.* Layers 1, 2 and 3. The other layers have not yielded any coins. Out of the seventeen coins, only eleven are in a readable condition. The time span they cover is from 1260 A.D. to 1895 A.D., a period of six centuries, corresponding to Period IV of the present excavation.

Most of these belong to the coinage of the Gujarat Sultans and a few bear their corrupt legends, but were minted by local rulers. The coins in general are poor in metrology and workmanship and have nothing new to add to the numismatic data about the Gujarat Sultans or their local successors.

Though the excavation yielded only Muslim coins, still the whole of Okhamandala and particularly Dwarka and Pindara have yielded tiny silver coins of the Kshatrapas and the Guptas. These are again of the Saurashtra fabric. It is, therefore, quite possible that this part of Saurashtra was also ruled by these dynasties. About the Kshatrapas there is little doubt as a stone inscription of their rulers has been found at Mulawasar, near Dwarka.

Layerwise distribution of the coins and their descriptions and dates are as follows :—(Plate IX).

Layer I (Period IV)

No. 3

Shape : Round	Metal : Copper	Weight : 1.500 gms.
Obv : Blurred	Rev : Blurred	

No. 106

Coin of Gujarat Sultan Muzaffarshah III (1560—1573 A.D.)[8]

Shape : Round | Metal : Copper | Weight : 9.500 gms.

Obv :

الدنيا
شمس
والدين ۷۱

Rev :

شا
مظفر ہ

No. 139

Dokḍā : Coin of Desalajī II (1819—1860 A.D.)[9]

Shape : Round | Metal : Copper | Weight : 11.960 gms.

Obv : Incomplete and indistinct legend of the Mughal Emperor Akbar II

Rev : व श्री

Layer 3 (Period IV)

No. 175

Coin struck in the name of the Mughal Emperor Shāh Ālam II (1795—1806 A.D.)[10]

Triśulī Pice : Both sides bear the triśula mark of the Banaras mint.

Shape : Round | Metal : Copper | Weight : 6 gms.

Obv :

سکہ
یک پائی
ऐक पाई
सीका

Rev :

شاہ
عالم باد
شاہ
جلوس ۲۵

No. 176

Shape : Round | Metal : Copper | Weight : 6 gms.

Obv : Blurred | Rev : Blurred

No. 182

Coin of the Gujarat Sultan Muzaffarshāh III (?) (1560—1573 A.D.)

Shape : Round | Metal : Copper | Weight : 13.950 gms.

Obv : Indistinct | Rev : Indistinct

No. 182A

Coin of the Gujarat Sultan Muzaffarshāh III (?) (1560—1573 A.D.)

Shape : Round | Metal : Copper | Weight : 13.990 gms.

Obv : Indistinct | Rev : Indistinct

No. 195

Shape : Round | Metal : Copper | Weight : 13.900 gms.

Obv : Blurred | Rev : Blurred

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1. Allan J., *Catalogue of the Coins in the Indian Museum, Calcutta*, Vol. IV, p. 199, pl. XI, 12.

2. *Ibid.*

3. *Ibid*, pl. X, 15.

4. *Ibid*, pl. X, 11.

5. *Ibid*, pl. X, 12.

6. Nelson W., *The Coinage and Metrology of the Sultans of Delhi*, p. 113, No. 443.

7. *Catalogue of the Coins in the Prince of Wales Museum of Western India, Bombay, The Sultans of Gujarat*, p. III, 270.

8. *Ibid*, pl. X, No. 840.

9. Allan, *Op. cit.*, pl. X, 15.

10. Thurston E., *History of the Coinage of the territories of the East India Company in the Indian Peninsula and Catalogue of the coins in the Madras Museum*, pl. XVI, 2.

No. 22

Shape : Round Metal : Copper Weight : 7.500 gms.

Obv : Blurred Rev : Blurred

Layer 2 (Period IV)

No. 10

Kori : Coin of Vibhāji of Nawanagar (1852—1895 A.D.)[1] with portions of the legend of Gujarat Sultan Muzaffarshah III (?), as shown in the obverse and reverse.

Shape : Round Metal : Silver Weight : 5.900 gms.

Obv:

السلطا
شا ١١٧٨
مظفر ٥
जाम

Rev :
Portions of

الرحمن
بتائيد
المويد
شمس
الدنياوالدين

No. 11

Dhinglā or *Dokḍā* : Coin of Vibhāji of Nawanagar (1852—1895 A.D.)[2]

Shape : Round Metal : Copper Weight : 7.950 gms.

Obv : As on No. 10, but Rev : As on No. 10

श्री जम

No. 17

Dokḍā : Coin of Desalaji II of Kutch, (1819—1860 A.D.)[3] with worn out legend of the Mughal Emperor Akbar II.

Shape : Round Metal : Copper Weight : 8 gms.

Obv :

شا
محمداكبر بادشا

Rev :

بهوج
ضرب
उश्रीदे

No. 18

Dokḍā : Coin of Rāyadhanaji II (1778—1813 A.D.)[4]

Shape : Round Metal : Copper Weight : 7.950 gms.

Obv : Indistinct Persian Legend Rev : Indistinct Persian Legend

No. 62

Shape : Round Metal : Copper Weight : 7.20 gms.

Obv : Blurred Rev : Blurred

No. 81

Dhiṅglā : Coin of Desalaji I (1718—1741 A.D.)[5]

Shape : Round Metal : Copper Weight : 5.500 gms.

Obv : Incomplete and indistinct Persian Legend Rev : Incomplete and indistinct Persian Legend

धींदेस

No. 98

Coin of Ghiyath-ud-din Tughluq (1320—1325 A.D.)[6]

Shape : Round Metal : Billion Weight: 3 gms.

Obv : Rev :

Obv	Rev
السلطان ..	ابوالمظفر
غياث الدنيا	تغلق شاه
والدين	السلطان

No. 99

Coin of Gujarat Sultan Mahmūd I (1459—1511 A.D.)[7]

Shape : Round Metal : Copper Weight : 5.500 gms.

Obv : Rev :

Obv	Rev
الدنيا	محمود شاه
ناصر	محمود شاه
والدين ٨	بن
	السلطان

V

POTTERY

General

Since our excavations were very limited in nature, the yield of pottery is not much, and complete or fragments of recognizable shapes are still less. And this is a marked feature of the deeper layers, comprising Periods I and II. Nevertheless, each Period has given some distinctive Pottery.

Thus a Painted Red Ware with features which do not occur later appears in Period I (Fig. 17). Along with this we have also a slipped ware, Coarse Red Ware, Burnished Red Ware and a Black Ware.

Period II has some of these, but its most prominent feature is that it presents us with the Red Polished Ware and the Amphora.

Period III has nothing remarkable as far the fabrics are concerned. Attention may however be drawn to a peculiar type (ceremonial vessel or stand).

In Period IV, once again, a Painted Red Ware occurs, but it is quite different from the Painted Red Ware of Period I. Besides the ordinary and usual wares, three distinctive wares are found, viz. Celadon Ware, Kaolin Ware and Glazed Ware.

In all, about 19 types or shapes are noted:

1. Globular Pots
2. Pots with ledged or ribbed body
3. Basins
4. Vessels with stand base
5. Carinated Pots
6. Pans
7. Flat based bowls or Kundas
8. Pots with inturned or projecting rim on the interior and exterior and having no neck.
9. Cooking pots with constricted neck
10. Lids
11. Red Polished Ware
12. Amphora Ware
13. Storage Jars
14. Pots with vertical neck
15. Ceremonial Vessel or Stand
16. Celadon Bowl
17. Celadon pot with ring-base
18. Kaolin Ware—Narrow concave necked
19. Glazed Ware

PERIOD I

Period I comprises layer (7) which is sandy. Pottery from this period is mostly fragmentary having its surfaces affected by salty sand. Some of the sherds got their edges rounded off indicating that they have undergone rolling in water. In spite of this some rim fragments and pieces from the body portions of pots give an idea of their shape.

The Red Ware is the major ware of this period which is about 95%, while the Black Ware is insignificant. The Red Ware is divided into Slipped Red Ware, Burnished Red Ware, Coarse Red Ware and Painted Red Ware. The Black Ware can be divided into Coarse Black Ware, Slipped Black Ware and Burnished Black Ware.

Core

Sections of red ware sherds are generally black in the centre, flanked by red and sometimes uniformly red, while those of black ware are uniformly black.

Clay and Firing

The clay used is coarse, but the pots were fired to a high temperature as they give ringing sound when dropped on hard surface.

Technique

The pottery is mostly wheel-turned. The pots with bulbous body or carinated body were first turned on a wheel and after some drying the body was beaten to the required shape without touching the rim and the neck.

Decorations

The decorations are confined to shoulder portions and rims of pots. Painted decorations, which appear only on the red ware, are generally bands and sometimes arches or loops between the bands. These decorations are executed in black colour, either on matt slipped surface or burnished slip surface. Incised, impressed or applique decorations generally appear on black ware. A solitary example of incised decoration occurs in the red ware.

The Method of Classification

The system adopted in classifying the pottery is as follows:–

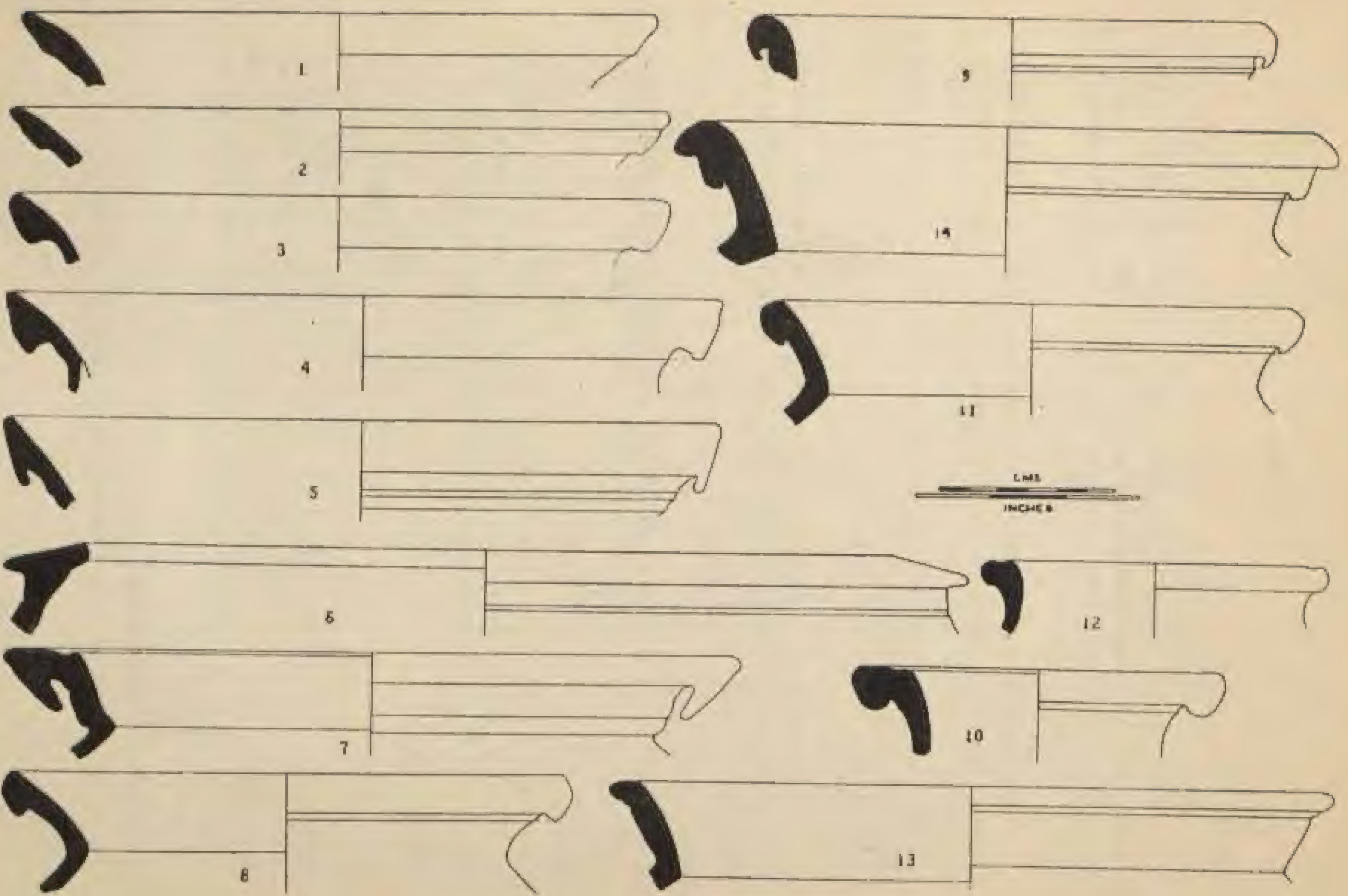


Fig. 15: Period I, Slipped Red Ware, Nos. 1-14 (See pp. 61 and 63).

1. The main types have been given a serial numerical number, e.g. 1, 2, 3 and so on.
2. The major variations in the main types are denoted by capital letters in alphabetical order, e.g. A, B, C and so on.
3. The sub-variations in the major groups of variations are given small numerical numbers, e.g. $1A_8$ etc.

All the shapes, their major variations and sub-variations from different wares of Periods I are taken as standard. In the succeeding periods when the same shape with its variations and sub-variations occurred, their occurrence was noted in the respective wares and were dropped by not illustrating them again. The new shapes in the succeeding phase were included and were numbered following the serial order of shape, major variation and sub-variation.

Decorations of all types—incised, applique, impressed or painted—are numbered serially by adding a prefix D, which stands for decoration.

I. *Slipped Red Ware.* (Figs. 15—16)

This ware has its outer surface treated with red slip which is not burnished.

The shapes occurring in this ware are as follows:—

1. *Globular Pots.* (Fig. 15, Nos. 1-14; Fig. 16, Nos. 15 & 16) Pots with bulbous body, having concave or constricted neck and flaring mouth.

1A. *Globular pots having a fillet band for rim.* The nature of these fillets is between insignificant to sharply over hanging with an undercut on the outer side. Their sections appear like single barbed point.

The following sub-variations are illustrated.

1. $1A_1$ No. 711 DWK (7), having insignificant fillet band.
2. $1A_2$ No. 712 DWK (7), with a light groove at the base of the fillet.
3. $1A_3$ No. 735 DWK (7), with prominent ledge under the fillet.
4. $1A_4$ No. 703 DWK (7), having undercut and vertical fillet band.
5. $1A_5$ No. 715 DWK (7), flaring mouth deeply undercut fillet band.

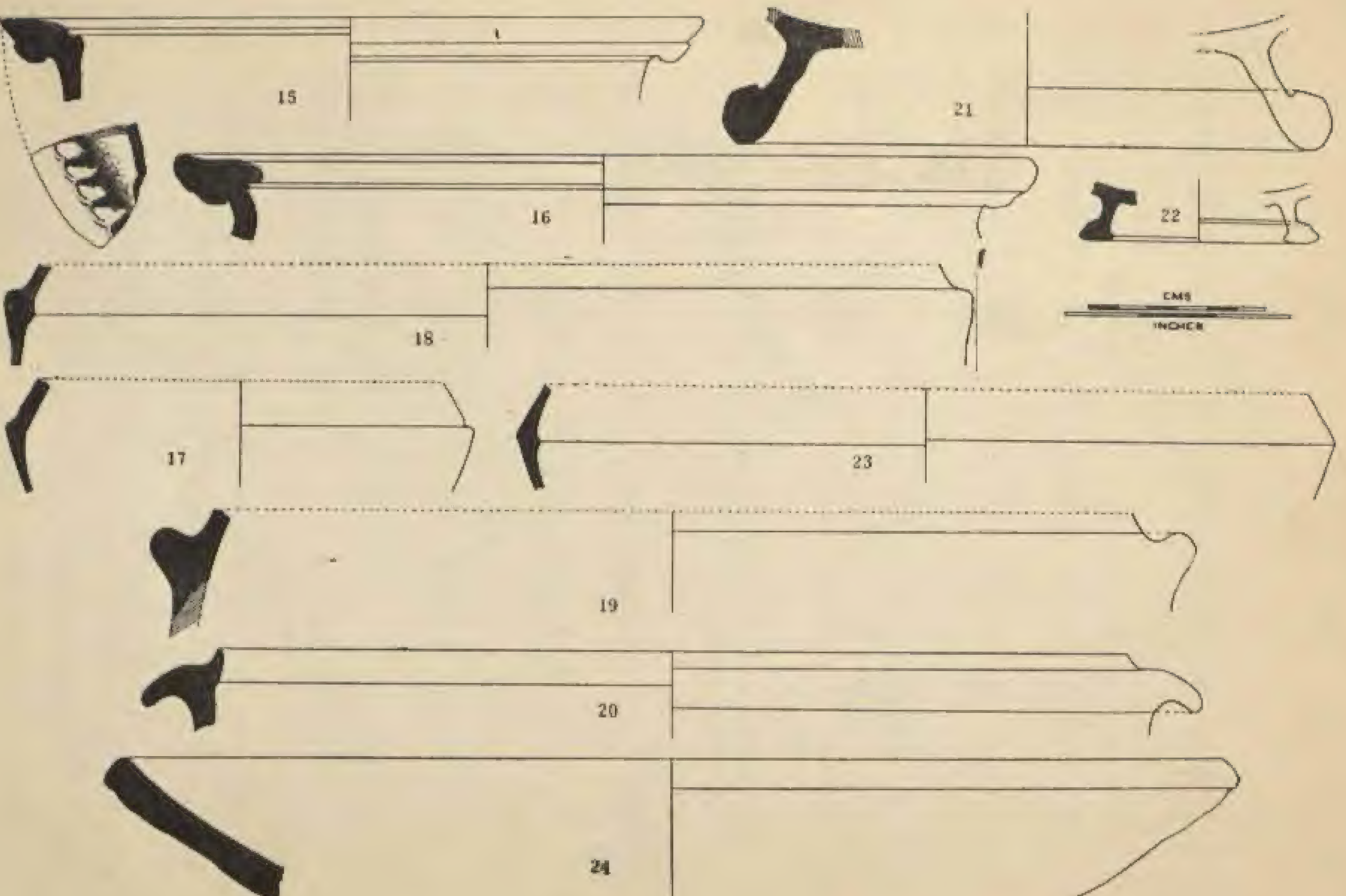


FIG. 16: Period I, Slipped Red Ware, Nos. 15-24 (See pp. 61, 63 and 65).

6. $1A_6$ No. 710 DWK (7), with undercut fillet band, which is inturned. Note:—This sub-variation should really be grouped with shape No. 8 which is with rim with inturned mouth; but as the rim type is single barbed type, so has been classified here.

7. $1A_7$ No. 736 DWK (7), flaring mouth, undercut fillet band and constricted neck.

1B. *Pots with possibly bulbous body, flaring mouth, concave or constricted neck and beaded rim, generally undercut.*

The following sub-variations are recorded.

8. $1B_1$ No. 732 DWK (7), with flaring mouth, constricted neck and lightly undercut beaded rim.

9. $1B_2$ No. 733 DWK (7), flaring mouth and deeply undercut beaded rim.

10. $1B_3$ No. 707 DWK (7), bevelled in beaded rim, lightly undercut and concave neck.

11. $1B_4$ No. 706 DWK (7), broad flaring mouth, constricted neck, flat-topped beaded rim lightly undercut.

12. $1B_5$ No. 737 DWK (7), concave neck, flat and groove beaded rim.

1C. *Pots with out-turned rim flaring mouth and constricted neck.*

13. $1C_1$ No. 752 DWK (7), sharp out-turned rim with flat top, flaring mouth and constricted neck.

14. $1C_2$ No. 753 DWK (7), out-turned rim with a ledged band below it, flaring mouth and constricted neck.

15. $1C_3$ D1. No. 754 DWK (7), sharp flaring rim with a band of pinch decoration (decoration No. 1) on the outer side and constricted neck.

1D. *Pots with bulbous body, concave neck and collared rim.*

16. $1D_1$ No. 755 DWK (7), concave neck flat projecting collared rim on the interior also.

2. *Pots with ledged or ribbed body.* (Fig. 16, Nos. 17–19)

17. $2A_1$ No. 750 DWK (7), part of a small pot with light ridged carination on the belly.

18. $2B_1$ No. 714 DWK (7), part of a belly portion of a pot with prominent ledge.

19. $2C_1$ No. 713 DWK (7), belly portion of a pot with projecting ledge.

3. *Basins* (Fig. 16, No. 20)

3A. *Basins with collared rim.*

20. $3A_1$ No. 716 DWK (7), broad hanging collared and sharp thin upright rim.

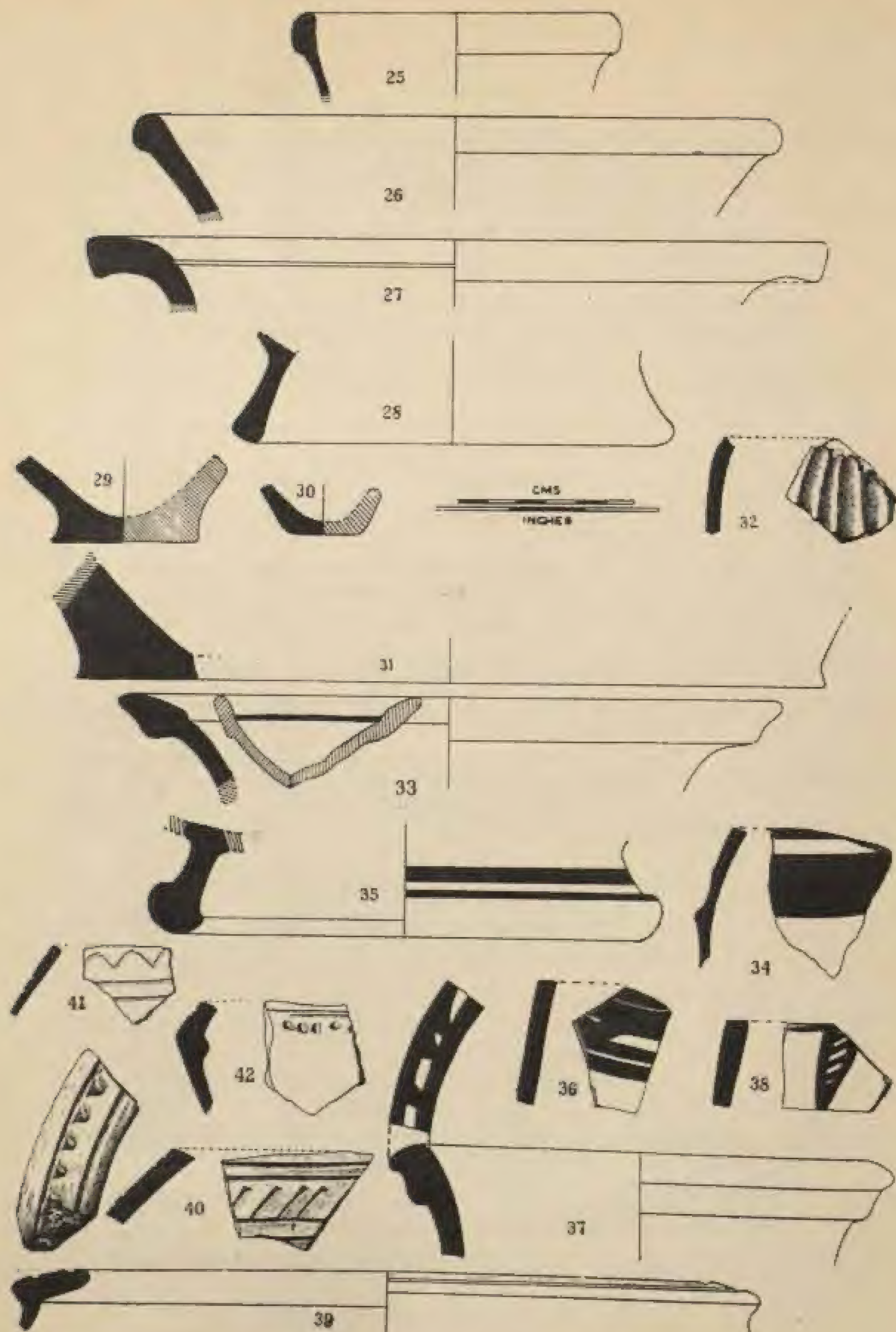


FIG. 17: Period I, Coarse Red Ware, (Nos. 25-32), Painted Red Ware, Nos. 33-38, Black Ware. Nos. 39-42, (See pp. 65-67).

4. *Vessels with Stand base.* (Fig. 16, Nos. 21–22)

4A. *Stands with beaded rim.*

21. $4A_1$ No. 717 DWK (7), stand with beaded rim and the bottom portion of a vessel which was supported by this stand.

4B. *Stands with hoof-shaped rim.*

22. $4B_1$ No. 718 DWK (7). Squat and tiny stand with flat beaded rim appearing like a hoof in the section.

5. *Carinated Pots.* (Fig. 16, No. 23)

5A. *Pots with carination at the belly.*

23. $5A_1$ No. 718 DWK (7), carinated belly portion of a pot.

6. *Pans.* (Fig. 16, No. 24)

6A. *Pans with insignificant rim.*

24. $6A_1$ No. 719 DWK (7), shallow baking pan with squared edge, and underside covered with soot.

II. *Coarse Red Ware* (Fig. 17)

In this category of ware the surface is not at all treated either by way of a slip or burnishing. The clay used, technique of making and method of firing them are similar to the slipped ware.

Shapes present in this ware are as follows :–

$1A_1$, $1A_2$, $1B_2$, 4A (not illustrated).

$1B_6$, 3B, $3C_1$ and $4C_1$ (illustrated).

25. $1B_6$ No. 729 DWK (7), vertical neck and ledged beaded rim.

3B. *Basins with beaded rim.*

26. $3B_1$ No. 721 DWK (7), flaring sided basin with beaded rim.

3C. *Basins with flat projecting rim.*

27. $3C_1$ No. 741 DWK (7), flat projecting collar with squared rim.

4C. *Squared rim stands.*

28. $4C_1$ No. 742 DWK (7), stand with squared rim.

7. *Flat based bowls or Kundas.*

7A. *Bowl with discoid base.*

29. $7A_1$ No. 722 DWK (7), flaring sided bowl with discoid flat base. Entire bowl was made on wheel.

7B. *Flattened base.*

30. $7B_1$ No. 723 DWK (7), flaring sided bowl with flat base, entirely turned on wheel.

7C. *Kunda or Storage jar with discoid base.*

31. $7C_1$ No. 743 DWK (7), flat discoid base of a kunda.

Decorated Sherds

32. D2 No. 744 DWK (7), a sherd decorated by pressing a thin stick at intervals giving a ribbing effect.

III. *Burnished Red Ware*

A few sherds of this ware have been found in Period I. The surfaces are burnished, while the clay used and the technique employed in shaping and firing is similar to that employed for slipped and coarse red wares.

The following shapes occur in this ware.

$1B_2$, $1B_4$, and $5A_1$, (not illustrated).

IV. *Painted Red Ware* (Fig. 17)

Generally the painting appears on matt red surface, but the sherds with paintings executed on the burnished surface are not lacking.

The shapes occurring in this ware are as follows:—

$1A_5$, $1B_8$, $1C_1$, $1C_2$, 2C (not illustrated).

$1A_8$, $2D_1$ and $4D_1$ (illustrated). Decoration Nos. D3, D4 and D5 are also illustrated.

33. $1A_8$ No. 724 DWK (7), flaring rim with fillet band having a mild ledge on the interior and horizontal bands painted on it.

34. $2D_1$ No. 725 DWK (7), ribbed sherd with burnished surface and broad band painted in black colour above the rib.

35. $4D_1$ No. 726 DWK (7), stand base of a pot with beaded rim grooved on either side and a black band painted on the red matt surface.

Decorated Sherds

36. D3 No. 727 DWK (7), arches between double line bands painted on the shoulder portion of a pot.

37. D4 No. 728 DWK (7), scallops painted on the rim of Type $1C_2$.

38. D5 No. 749 DWK (7), a leaf (?) painted on burnished red surface.

V. *Black Ware* (Fig. 17)

Black Ware is very insignificant in Period I. Not more than 50 sherds including small bits were found.

This ware is dark-grey to black in appearance, the surface being coarse, smooth or burnished. The decoration on this ware, if any, is incised

Shapes in this ware are:—

3B, $5A_1$, 7B (not illustrated).

$8A_1$ and decoration Nos. 6-8 (illustrated).

8. *Pots with inturned or projecting rim on the interior and exterior and having no neck.*

8A. *Pots with flat and inturned rim.* (Fig. 17)

39.	$8A_1$ D6	No. 729 DWK (7), part of a flat projecting rim of a pot with incised lines and impressed triangles (decoration No. 6). Note:—Type $1A_4$ is similar in shape, but in the beginning following the rim pattern it is classified there.

Types of Decorations

These are either incised or impressed. (Fig. 17)

40.	D7	No. 730 DWK (7), incised oblique lines between group of double lines.
41.	D8	No. 731 DWK (7), incised wavy line.
42.	D9	No. 788 DWK (7), a row of pricked depressions above the carinated portion—Type $5A_1$.

PERIOD II

Layers (6) and (5)

The quantity of Red Ware and the Black Ware is almost equal. The clay used and the technique employed in shaping the pot are the same as in Period I. The surfaces of potsherds are affected in a similar way as in the previous period, for the layers 6 and 5 which comprise phase II are also sandy.

It is interesting to note in the case of black ware that it was decorated with punch, impressed or incised methods, and then burnished.

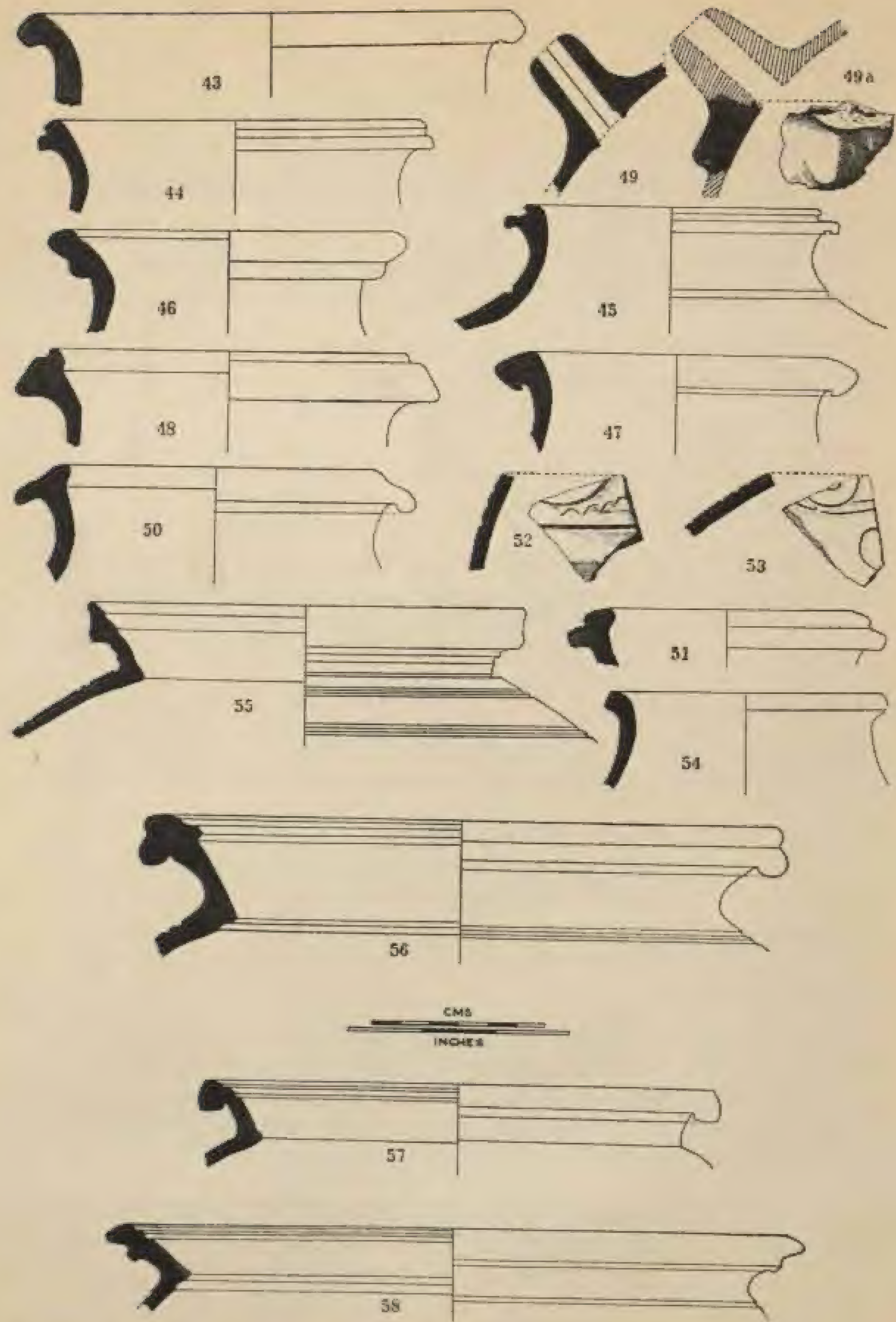


FIG. 18: Period II, Slipped Red Ware, Nos. 43-45, Burnished Red Ware, Nos. 46-49a, Coarse Red Ware, Nos. 50-53, Black Ware, Nos. 54-58 (See pp. 69 and 71.)

Slipped Red Ware (Fig. 18)

The following shapes occur in this group of red ware.

$1B_6$, 2C, 8A (without decoration) are not illustrated. $1E_1$, $1E_2$, and $1B_7$ are illustrated.

43. $1B_7$ No. 558 DWK (5)—concave neck with simple beaded rim.

1E *Rims with projecting band* (Fig. 18)

44. $1E_1$ No. 556 DWK (5), narrow collared rim, grooved and narrow neck.

45. $1E_2$ No. 557 DWK (5), over-hanging narrow collared rim, grooved and having concave neck.

Burnished Red Ware (Fig. 18)

Shapes present are $1J_1$, $1F_1$, $1G_1$, $1G_2$ (illustrated).

1F *Grooved beaded or double beaded rim* (Fig. 18)

46. $1F_1$ No. 559 DWK (5), flaring mouth, concave neck and grooved beaded or double beaded rim.

1G *Bevelled rims* (Fig. 18)

47. $1G_1$ No. 560 DWK (5), concave neck bevelled out and under-cut projecting rim.

48. $1G_2$ No. 561 DWK (5), concave neck steeply bevelled projecting and under-cut rim on both sides.

1J *Spouted pots with bulbous body* (Fig. 18)

49. $1J_1$ No. 562 DWK (5). Short nipple-shaped spout, possibly with a knob under it.

No. 562a DWK (5), knob, which serves as a support to the spout (in slipped red ware).

Coarse Red Ware (Fig. 18)

The following shapes occur in this group of pottery.

$1C_2$, $1G_1$, $1J_1$, 7A (not illustrated).

$1E_3$ and $1E_4$ and decorations Nos. D10 and D11 (illustrated).

50. $1E_3$ No. 537 DWK (5), concave neck with lightly flaring mouth, and projecting collared rim.

51. $1E_4$ No. 538 DWK (5), bevelled cut rim with a projecting collar band below it.

Decorated Sherds (Fig. 18)

52. D10 No. 535 DWK (5), incised scallops and possibly a circle and scraped horizontal bands.

53. D11 No. 536 DWK (5), incised double circles, and a pair of horizontal bands between them.

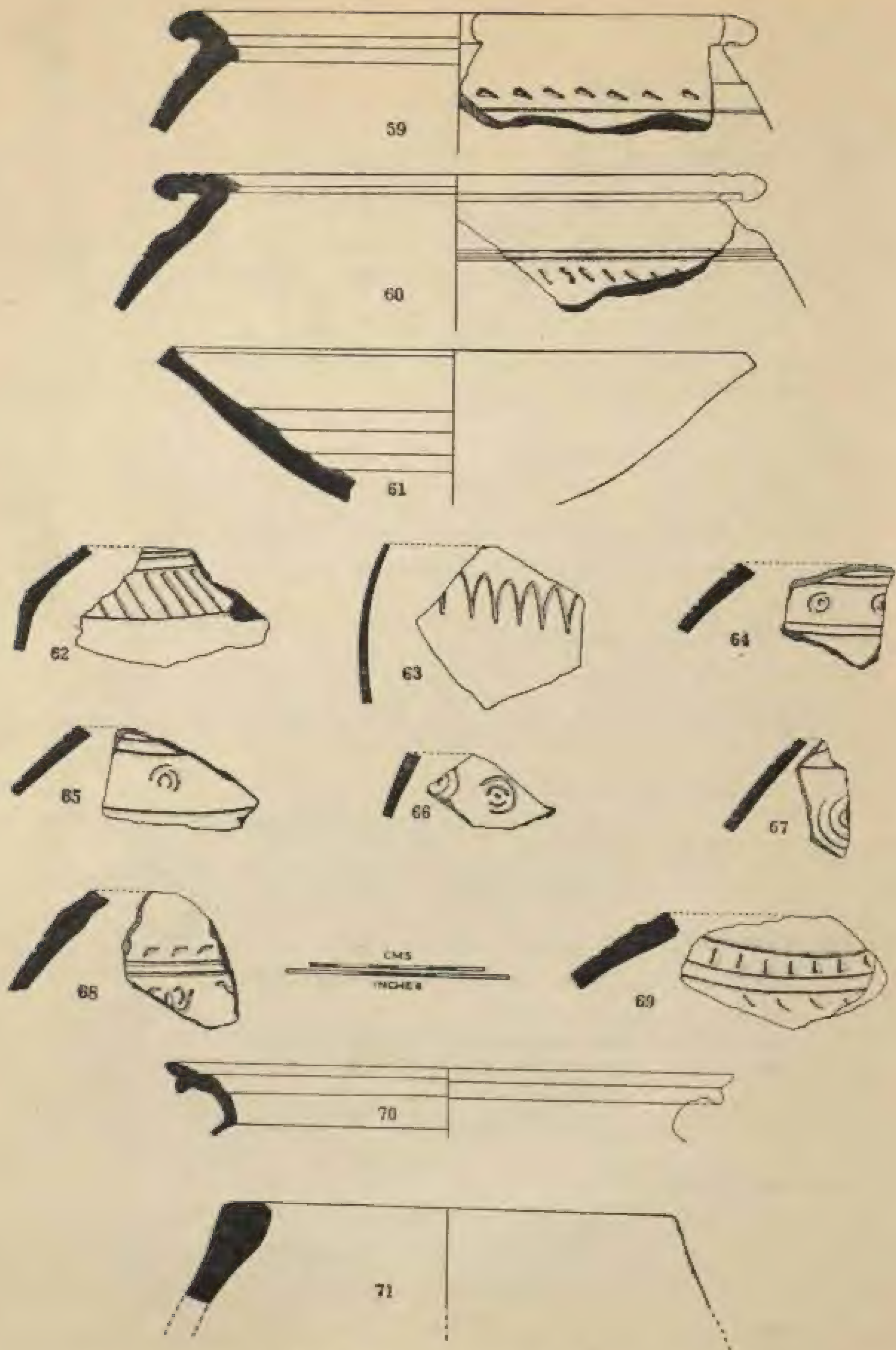


FIG. 19: Period II, Black Ware, Nos. 59-69, Red Polished Ware, No.70 Amphora No. 71 (See pp. 71-73)

Black Ware (Fig. 18, Nos. 54-58; Fig. 19, Nos. 59-69)

The shapes are as follows:—

$5A_1$, $8A_1$ (not illustrated);

$1D_2$, $1F_2$, $1F_3$, $1G_3$, $1H_1$, $9A_1$, $9A_2$ and $10A_1$ and D14 to D21 (illustrated). Of these D_2, $1G_3$ and 10A are Coarse Black whereas the rest are burnished.

54. $1D_2$ No. 563 DWK (5), out-turned flat rim with a raised band below it, flaring mouth, constricted neck making an angular projection on the interior, and two grooves near the rim. (Coarse Black Ware).

55. $1F_2$ No. 565 DWK (5), flaring mouth, grooved fillet rim, and grooved on the shoulder.

56. $1F_3$ No. 566 DWK (5), flaring mouth, grooved rim with a projecting ridge on the interior and constricted neck.

57. $1G_3$ No. 564 DWK (5), flaring mouth, bevelled out rim with two grooves on the interior and constricted neck. (Coarse Black Ware).

1H *Squared Rims* (Fig. 18)

58. $1H_1$ No. 562 DWK (5), concave neck and out-turned square rim.

9. *Cooking pots with constricted neck.*

9A. *Cooking pots with constricted neck and ledged shoulder.*

59. $9A_1$ D12 No. 567 DWK (5), pot with constricted neck, out-turned rim and a ridge on the interior at the neck, a mild ledge on the shoulder, and decorated with pressed slant triangles (decoration No. D12).

60. $9A_2$ D13 No. 565 DWK (5), broad out-turned rim with a pair of grooved lines, constricted neck and ledge at the shoulder with impressed short slant recurved lines (decoration No. D13).

10. *Lids.* (Fig. 19)

10A. *Domical lids with knob handle.*

61. $10A_1$ No. 569 DWK (5), domical lid with squared rim, and coarse surfaces. (Coarse Black Ware).

Decorated sherds (Fig. 19)

Decorations on the black ware are incised, scraped or impressed. They seem to have been carried out before the process of burnishing the surface, as the edges of the decorations are pressed inwards.

Types of decorations are as follows:—

D6, D7, D8, D9, D10, D13 (not illustrated) and D14 to D21 (illustrated).

62. D14. No. 570 DWK (5), incised oblique lines to left above the carinated part of the pot.

63.	D15	No. 571 DWK (5), incised high scallops.
64.	D16	No. 572 DWK (5), impressed circle with a dot between groups of double incised lines.
65.	D17	No. 573 DWK (5), impressed double circle between groups of double incised lines.
66.	D18	No. 574 DWK (5), a row of impressed double circles with a dot at the centre.
67.	D19	No. 575 DWK (5), impressed three concentric circles.
68.	D20	No. 576 DWK (5), impressed angular strokes and connected ovals separated by a pair of incised lines.
69.	D21	No. 577 DWK (5), impressed short vertical triangles at intervals and a pair of incised lines and wavy lines below it.

Red Polished Ware

This ware is made from very well levigated clay, fired to a high temperature and oxidized completely as the section shows uniform red colour. Surfaces are highly polished which reflect light and the colour is red to orange. Since its clay and firing are in marked difference with those of local wares and the shapes are very much restricted, it is believed that the ware is imported from the Roman world. Unfortunately no direct proof is available, as these shapes are obscure in Italy or in Rome's African and Asian colonies. Very late it was made in India in imitation of the Arretine and other wares by the Romans or under their direction.

Only one piece was found in Period II, while it was absent in the earlier period. This ware is recorded from many sites in Saurashtra.

70.	11	No. 578 DWK (6), flaring mouth constricted neck of a pot, possibly with a bulbous body, having grooved rim and a ledge on the interior and having highly burnished surfaces. This shape is very much similar to shape $1F_1$ in black ware—Period II.

Amphora Ware (Fig. 19)

Unlike the Red Polished Ware this is definitely imported ware. It is thick, gritty and compact in appearance and has a coarse surface. This ware was mainly used for exporting wine and olive oil from the Roman Empire. Since the latter was in lesser demand in India and since sherds have been found with dried resin mixture, it is most probable that all Indian examples are wine amphoras. All the five sherds found in Period II show black incrustation on the inner surface. Similar black incrustation was found on

amphora sherd at Nevasa, which on chemical analysis was found to be the residue of an ingredient (resin) used in the preparation of Roman wine.

The shape of this vessel is elongated, with a pointed base, a narrow cylindrical neck and two handles attached to the rim and the shoulder. The shape could be understood at Nevasa as sherds from different parts of the pots were found there.

71.	12.	No. 579 DWK (6), rim of an amphora which is bevelled on the outer side. Stony compact core showing uniform pink colour, outer surface pink and coarse, and the inner surface with black incrustation.

PERIOD III

Layer (4)

The quantity of pottery is greater in this period as compared to that of the two earlier periods. The percentage of black ware is more as against the red wares which were either slipped or coarse. Burnished red ware is rare.

The clay used for making pots is not fine and is inferior to the clay used in earlier periods. Even the firing is inferior as sherds do not give ringing sound when dropped on a hard surface.

The shapes in different groups of red ware are as follows:—

Slipped Red Ware (Fig. 20)

Shapes occurring are $1D_1$, $1E_4$ (already illustrated), $1D_3$, $1D_4$, $1F_4$, $1G_4$, $1H_2$, $1J_2$, $8B_1$ and $10B_1$, $13A_1$, $13B_1$, $13B_2$, and $14A_1$. (illustrated).

72.	$1D_3$	No. 472 DWK (4), concave neck and flat topped grooved in rim.
73.	$1D_4$	No. 470 DWK (4), concave neck, flat collared and grooved rim projecting also on the inner side.
74.	$1F_4$	No. 471 DWK (4), concave neck, grooved beaded rim with a ledge on the inner side.
75.	$1G_4$	No. 438 DWK (4), concave neck with a rim which is flattened and undercut on the outer side bevelled and grooved on the inner side.
76.	$1H_2$	No. 466 DWK (4), concave neck, out-turned and flattened beaded rim.
77.	$1J_2$	No. 456 DWK (4), a short tapering spout of the carinated belly part of a pot.
78.	$8B_1$	No. 464 DWK (4), inturned clubbed rim with a projecting beaded collar band outside to serve as a hold.
79.	$10B_1$	No. 45 DWK (4), hollow and decorated handle of a lid.

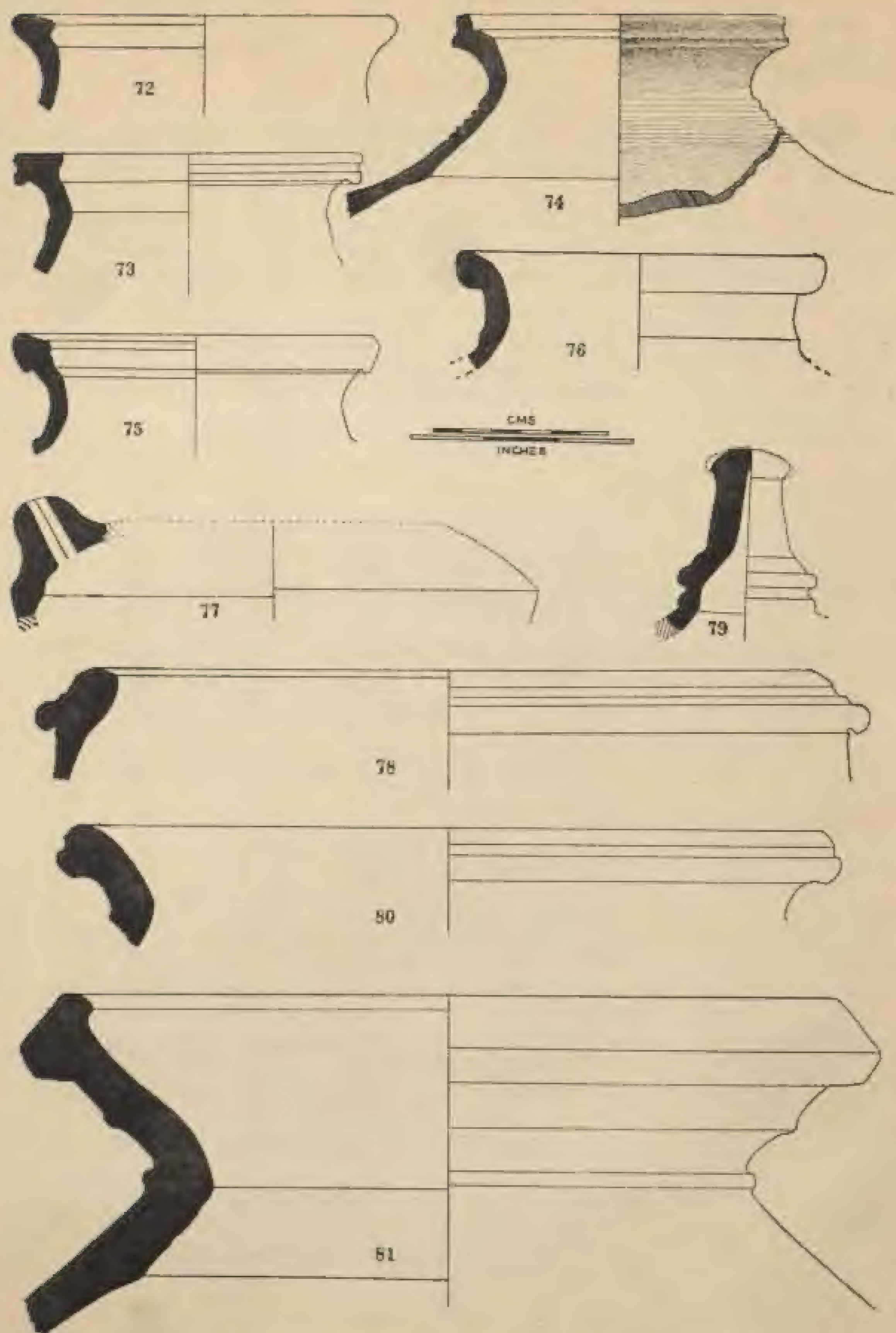


FIG. 20: Period III, Slipped Red Ware, Nos. 72-81 (See pp. 73 and 75)

13. *Storage Jars.* (Fig. 20, Nos. 80-81; Fig. 21, Nos 82, 84)

13A. *Storage jars with projecting collared rim.*

80. $13A_1$ No. 465 DWK (4), concave neck and projecting collared rim of a storage jar.

13B. *Storage jars with bevelled rim.* (Fig. 20, No. 81; Fig. 21 No. 82)

81. $13B_1$ No. 462 DWK (4), broad flaring mouth with bevelled out rim, a ridge outside below the rim and almost a constricted neck.

82. $13B_2$ No. 460 DWK (4), broad flaring mouth, almost a constricted neck, a thick flat band and inturned bevelled projecting rim, and ridges, outside below the flat band, and on the shoulder. Outer surface is matt crimson red with a white band painted on it at the neck.

14. *Pots with vertical neck.* (Fig. 21)

14A. *Pot with vertical neck and beaded rim.*

83. $14A_1$ No. 475 DWK (4), vertical neck with incurved beaded rim and a ridge outside below the rim.

Coarse Red Ware. (Fig. 21)

84. $13A_2$ No. 462 DWK (4), concave flaring mouth of a storage jar with constricted neck, projecting collared band rim and thin grooves and a ridge outside below the collar.

15 *Ceremonial Vessel or Stand.* (Fig. 21)

85. $15A_1$ No. 458 DWK (4), a part of a stand or vessel with open bottom.

Painted Red Ware (Fig. 21)

Few sherds with their outer surface painted were found, they are D22, D23 and D24. (illustrated).

86. D22 No. 476 DWK (4), shoulder portion of a globular pot with outer surface burnished and a broad white band painted on the neck portion.

87. D23 No. 479 DWK (4), shoulder portion of a globular pot with burnished crimson red surface outside and latticed hanging triangles painted in black colour and dots in white bordering them.

88. D24 No. 485 DWK (4), shoulder portion of a big globular pot with a band near the neck painted in crimson colour and below it hatched double lined zigzag (?) hanging to a hatched double lined band painted in black colour.

Burnished Black Ware (Fig. 22)

The following are the shapes which occur in this group of black ware.

$5A_3$, $8B_2$, $8C_1$, $13C_1$, $13C_2$, $13C_3$, $14B_1$, and designs D25 and D26 (illustrated).

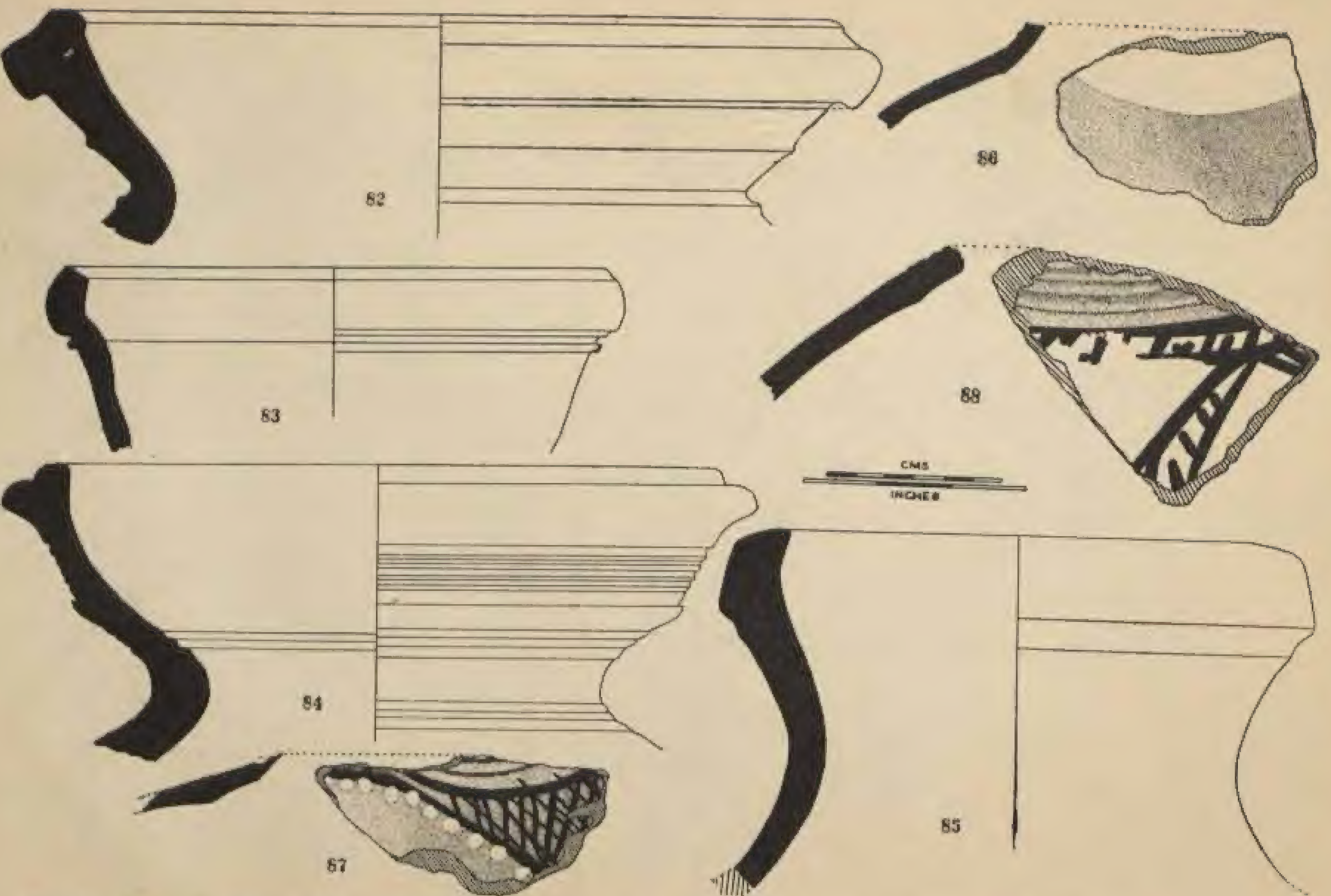


FIG. 21: Period III, Slipped Red Ware, Nos. 82-83, Coarse Red Ware, Nos. 84-85, Painted Red Ware, Nos. 86-88 (See p. 75)



FIG. 22: Period III, Burnished Black Ware, Nos. 89-95; Coarse Black Ware, No. 96 (See pp. 75 and 79)

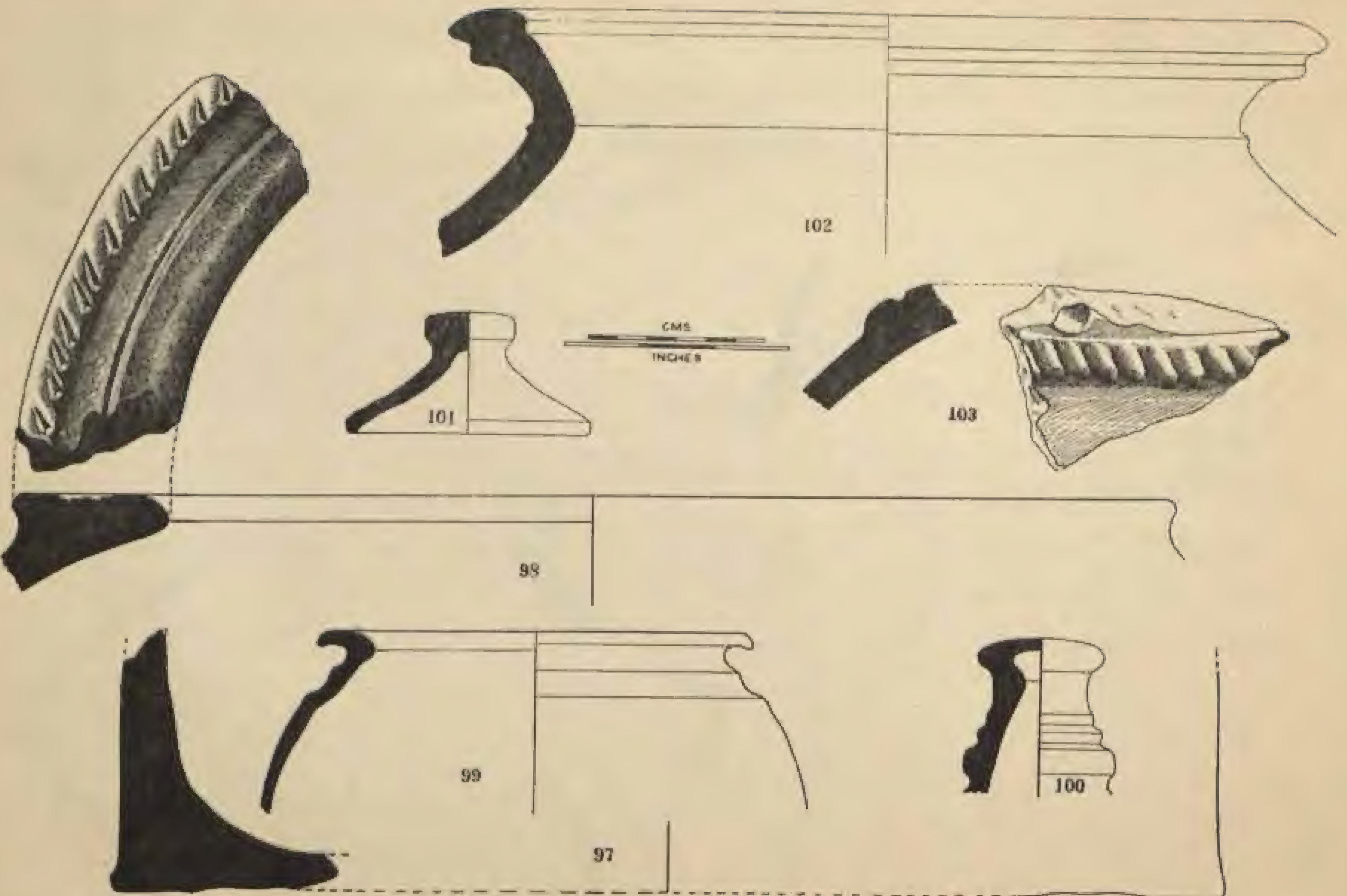


FIG. 23: Period III, Coarse Black Ware, Nos. 97-103. (See p. 79)

89. $5A_2$ No. 401 DWK (4), a complete pot with carinated belly, sloping shoulders, concave neck out-turned beaded rim and rounded base. Outer surface burnished on the shoulder, upto the carination only.

90. $8B_2$ No. 442 DWK (4), inturned clubbed rim with grooves and a prominent beaded collared band outside, possibly for holding.

91. $8C_1$ D25 No. 415 DWK (4), inturned beaded rim and a raised band with finger tip depressions.

13C Storage jars of medium size with beaded rim.

92. $13C_1$ No. 440 DWK (4), beaded rim with flat top and a groove on the inside and having a concave neck.

93. $13C_2$ No. 419 DWK (4), under-cut and flat topped beaded rim with a groove on the inner side and having a concave neck.

94. $13C_3$ D26 No. 445 DWK (4), under-cut beaded rim and a bevelled in projection and a raised band with impressed slant lines below the rim outside.

95. $14B_1$ No. 449 DWK (4), vertical neck with grooves and bevelled rim.

Coarse Black Ware (Fig. 22, No. 96; Fig. 23, No. 97-103)

The following shapes occur in this group of black ware.

$2E_1$, $7C_2$, $8A_2$, $9A_3$, $10B_2$, $10H_1$, $13D_1$, and design No. D27.

2E Pots with ridged or ledged carination at the belly.

96. $2E_1$ No. 412 DWK (4), ridged carinated pot with inturned and clubbed rim and round base.

97. $7C_2$ No. 405 DWK (4), flat base of a vessel with vertical wall. Hand-made.

98. $8A_2$ D27 No. 411 DWK (4), inturned flat and broad rim with oblique and elongated triangles impressed on it. It seems it must have been the mouth of a storage jar.

99. $9A_3$ No. 311 DWK (4), constricted projecting out rim, lodged shoulder and bulbous body. Rim decorated with pricked holes (D9).

100. $10B_2$ No. 416 DWK (4), decorated hollow stem handle of a lid, flattened on top, beaded and ridged bands at the base.

101. $10H_1$ No. 414 DWK (4), lid with straight sloping sides, rounded rim and discoid hold.

102. $13D_1$ No. 444 DWK (4), concave neck with flattened and grooved edge rim of a storage jar.

103. D28. No. 409 DWK (4), thick sherd of a storage jar decorated with impressed rope design.

Period IV

Layers (1), (2) and (3)

The bulk of pottery from this period is more as compared to the quantity from all the previous three periods put together. The red ware and the black ware were equal in quantity. The clay used and technique employed in shaping the pots are the same as in Period III.

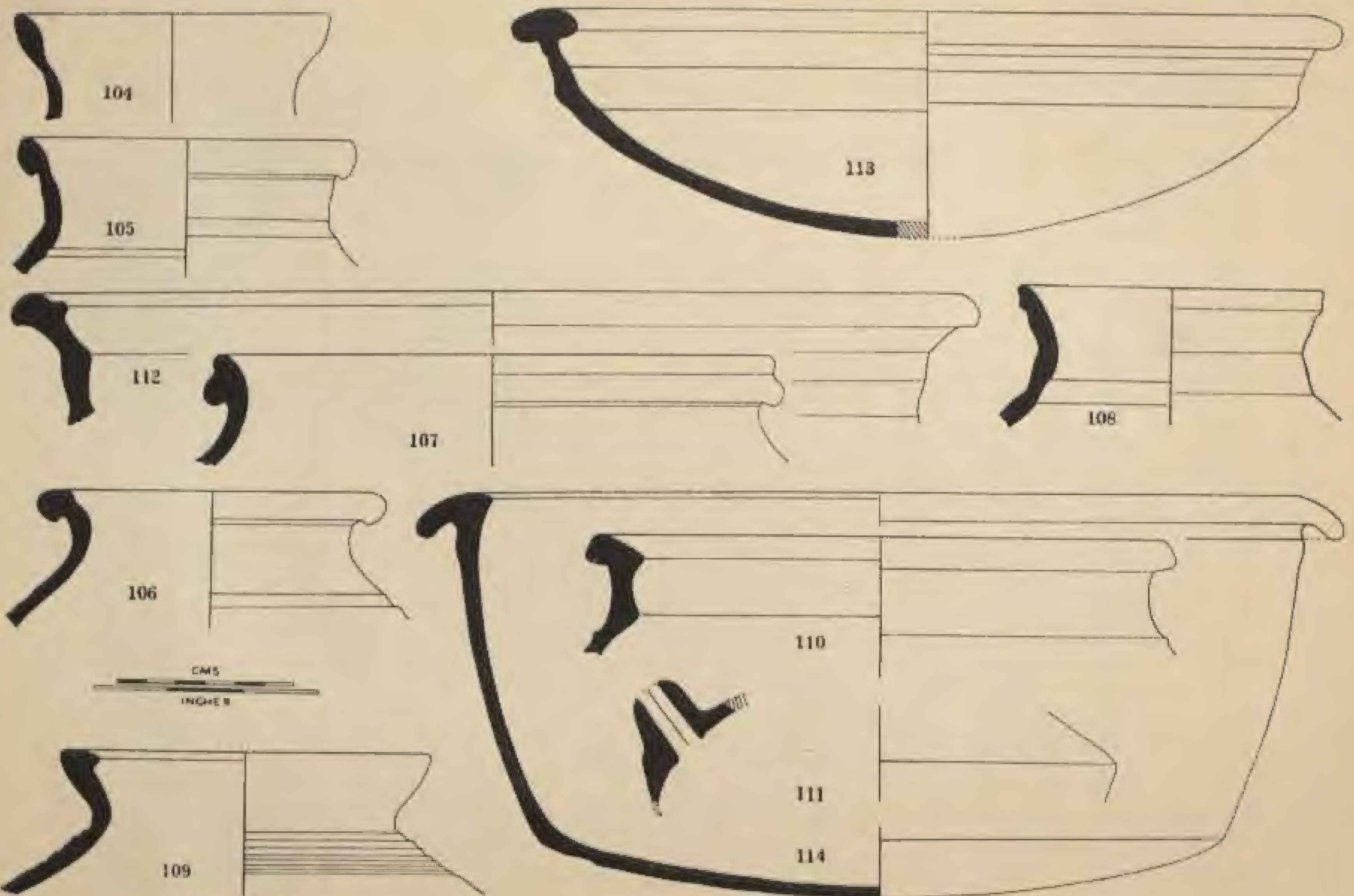


FIG. 24: Period IV, Burnished Red Ware, No. 104, Slipped Red Ware, Nos. 105-114 (See p. 81)

Burnished Red Ware (Fig. 24, No. 104)

The shapes occurring in this ware are:—

$1B_6$, $5A_1$, (not illustrated) and $1B_8$ (illustrated).

104. $1B_8$ No. 349 DWK (3) concave neck, clubbed rim and outer surface burnished.

Slipped Red Ware (Figs. 24, 25 & 26, Nos. 126-134)

The following shapes occur in this group of red ware.

$1D_1$, $1E_4$ (not illustrated) $1B_9$, $1B_{10}$, $1F_5$, $1F_6$, $1G_5$, $1H_3$, $1J_3$, $3D_1$, $3E_1$, $3F_1$, $3G_1$, $5A_3$, $5A_4$, $5B_1$, $5B_2$, $6B_1$, $7D_1$, $7E_1$, $9B_1$, $9B_2$, $9B_3$, $10C_1$, $10D_1$, $10E_1$, $10F_1$, $10G_1$, and $10H_1$, (illustrated).

105. $1B_9$ No. 355 DWK (3), concave neck elongated and under-cut beaded rim.

106. $1B_{10}$ No. 352 DWK (3), concave neck under-cut beaded out rim and a groove inside.

107. $1F_5$ No. 237 DWK (2), grooved under-cut rim and concave neck.

108. $1F_6$ No. 257 DWK (2), insignificant grooved rim and concave neck.

109. $1G_5$ No. 344 DWK (3), concave neck, bevelled and grooved in rim.

110. $1H_3$ No. 342 DWK (3), concave neck, flaring and bevelled rim with a broad deep groove inside.

111. $1J_3$ No. 214 DWK (2), a carinated pot with a short tabular and tapering spout.

112. $3D_1$ No. 338 DWK (3), part of a basin with flaring rim and two ridges on the inner side. Outer surface is coarse while inner one slipped.

3E *Basins with nail-headed rim.* (Fig. 24)

113. $3E_1$ No. 328 DWK (3), part of a shallow basin with nail-headed rim, a raised band below the rim outside and round base with patches of soot, possibly it was used as a cooking vessel.

3F *Basins with carination at the base.* (Fig. 24)

114. $3F_1$ No. 153 DWK (1), a deep basin with slightly bulging body, carination at the base and hanging out broad collared rim.

3G *Basins with flaring sides and flat beaded rim.* (Fig. 25)

115. $3G_1$ No. 246 DWK (2), a flaring sided basin with flat beaded rim.

116. $5A_3$ No. 321 DWK (3), pot with carinated belly, concave neck and round base. The walls are very thin.

117. $5A_4$ No. 236 DWK (2), a small carinated pot with short concave neck and out-turned rounded rim. Inner side black upto the neck. The base is rounded.

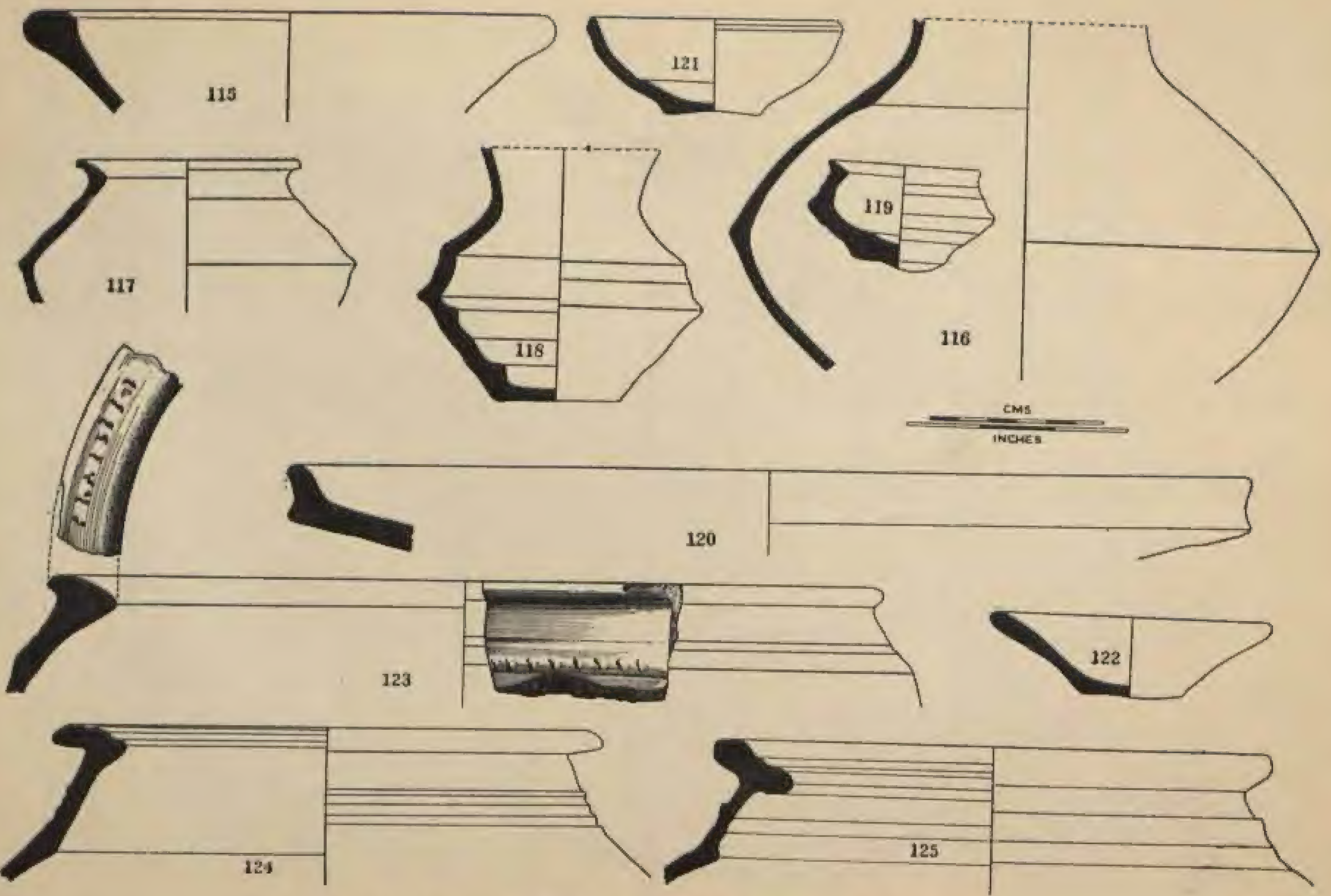


FIG. 25: Period IV, Slipped Red Ware, Nos. 115-125 (See pp. 81 and 83)

5B *Carinated pots with flat base.* (Fig. 25)

118. $5B_1$ No. 322 DWK (3), carinated pot with flat base and a ledge at the shoulder.

119. $5B_2$ No. 335 DWK (3), a small pot, possibly a bowl with broad mouth, ridged carination, sharp out-turned rim and flat discoid base.

6B *Pans with raised sides possibly dough plates.* (Fig. 25)

120. $6B_1$ No. 366 DWK (3), part of a small pan with short and flaring concave sides and flat base.

121. $7D_1$ No. 325 DWK (3), small bowl with convex flaring sides rounded rim and small discoid base.

122. $7E_1$ No. 324 DWK (3), a shallow flaring concave sided bowl with rounded rim and flat base. The rim at many places shows black marks with soot, indicating that this bowl was used possibly as a lamp. Its outer surface bear marks of lime; possibly the entire outer surface was coated with it.

9B *Pots with constricted neck and without ledged shoulder.* (Fig. 25)

123. $9B_1$ D29 No. 347 DWK (3), small out-turned sharp rim, constricted neck, impressed short slant lines to left on the shoulder and double row of pricked holes on the rim.

124. $9B_2$ No. 330 DWK (3), constricted neck, broad collared rim, grooved and projecting on the inner side.

125. $9B_3$ No. 343 DWK (3), constricted neck, beaded rim projected on the interior and exterior and a ridge on the shoulder.

10B *Lids with decorated holds and sloping sides.* (Fig. 26)

126. $10B_3$ No. 378 DWK (3), lid with decorated handle and sloping corrugated sides, a ledge and flat projecting rim. Outer surface was coated with lime. (This lid was shaped in two pieces and then they were luted).

10C *Bell-shaped lids.* (Fig. 26)

127. $10C_1$ No. 379 DWK (3), a bell-shaped lid with a hollow knob hold.

10D *Recurved and sloping sided lids.* (Fig. 26)

128. $10D_1$ No. 394 DWK (3), lid with recurved sloping sides and a knob handle on the top.

10E *Lids with broad rim.* (Fig. 26)

129. $10E_1$ No. 327 DWK (3), domical roof and a ledge on the interior and broad flaring rim.

10F *Lids with grooved rim.* (Fig. 26)

130. $10F_1$ No. 362 DWK (3), grooved beaded rim of a lid.

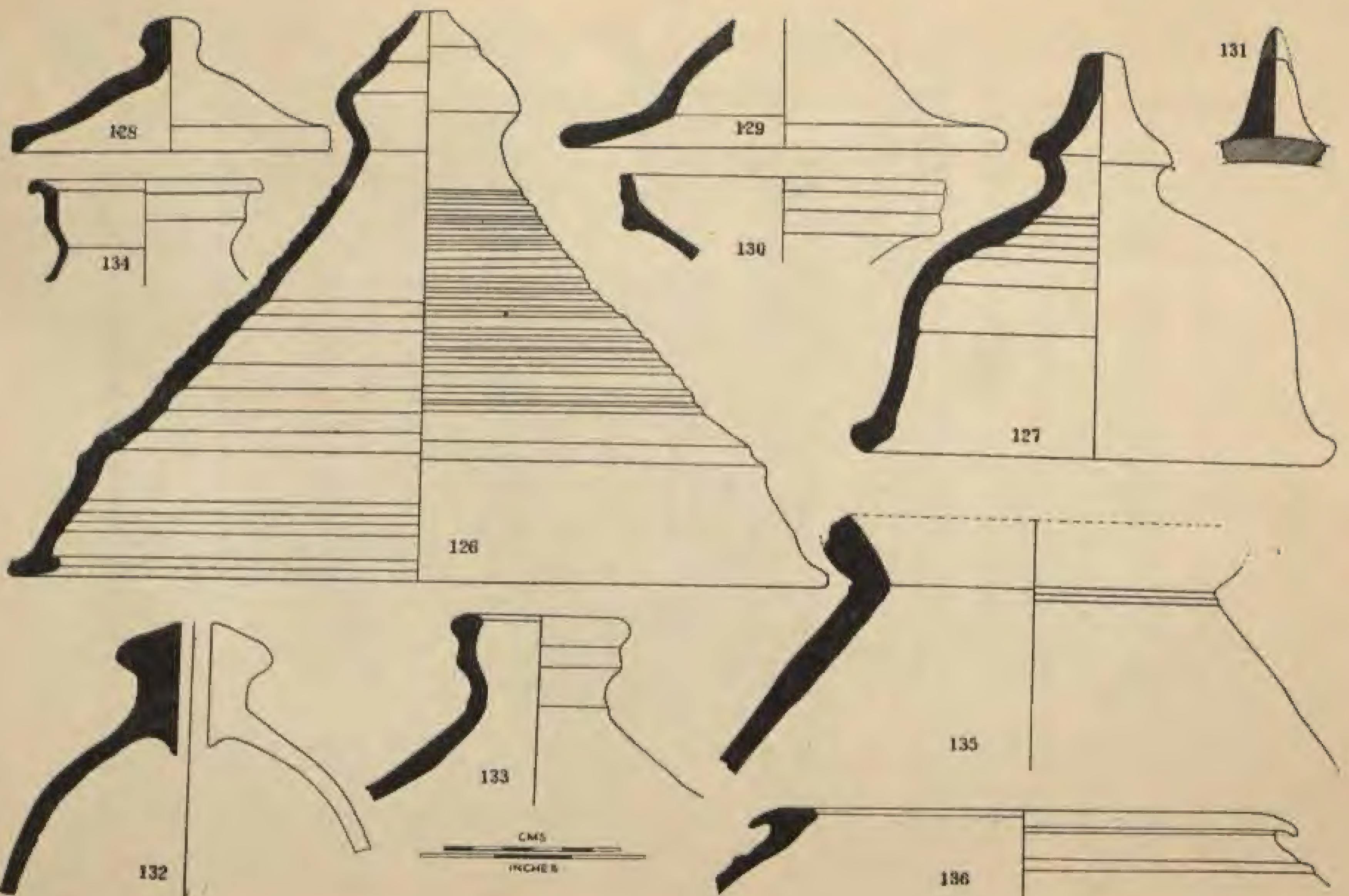


FIG. 26: Period IV, Slipped Red Ware, Nos. 126-134; Coarse Red Ware, Nos. 135, 136. (See pp. 83 and 86)

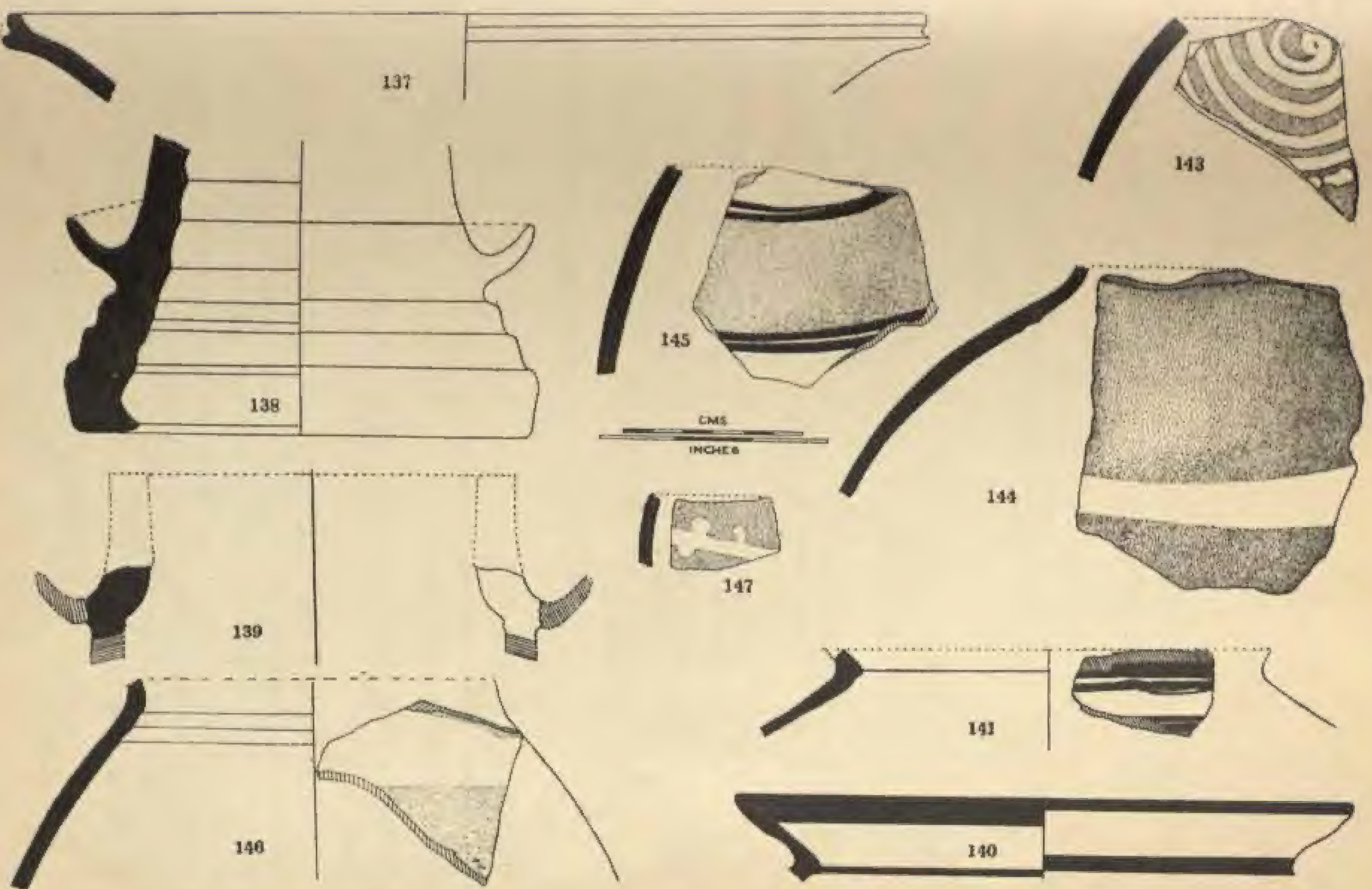


FIG. 27: Period IV, Coarse Red Ware, Nos. 137-139; Painted Red Ware, Nos. 140, 141, 143-147 (See pp. 86 and 87)

10G *Lids with conical handle.* (Fig. 26)

131. $10G_1$ No. 329 DWK (3), a conical solid handle of a domical lid.

10H *Lids with perforated handle.* (Fig. 26)

132. $10H_1$ No. 105 DWK (1), a domical lid with perforated handle pierced from outside.

14C *Narrow and vertical necked pots.* (Fig. 26)

133. $14C_1$ No. 193 DWK (1), grooved narrow and vertical neck and sloping shoulder.

134. $14C_2$ No. 159 DWK (1), grooved neck with out-turned thin rim.

Coarse Red Ware (Fig. 26, Nos. 135 & 136; Fig. 27, Nos. 137-139)

The following shapes appear in this group of ware.

$1B_6$, $1B_8$, $1B_9$, $1D_4$, $1F_2$, $2E_1$, $3D_1$, $5B_1$, $6A_1$, $7A_1$, (not illustrated), $1B_{11}$, $9B_4$, $10F_2$, $15A_2$, and $15B_1$ (illustrated).

135. $1B_{11}$ No. 326 DWK (3), constricted neck, small flaring mouth and beaded rim.

136. $9B_4$ No. 340 DWK (3), sharply out-turned broad rim with sharp edge, constricted neck and a ridged band on the shoulder.

137. $10F_2$ No. 251 DWK (2), grooved rim of a sloping sided lid.

138. $15A_2$ No. 369 DWK (3), a part of a vessel with open bottom and two small lamps or lugs(?) attached on the outer surface which is coated with lime.

139. $15B_1$ No. 368 DWK (3), a sherd with a lamp or lug attached to it as with Type $15A_2$ and having an angular cut-perforation.

Burnished Red Ware

Shapes in this ware are as follows :—

$5A_1$ and $9B_4$ (not illustrated).

Painted Red Ware (Fig. 27, Nos. 140, 141, 143-147; Fig. 28)

RESERVED SLIP

Most of the sherds in this group are slipped red ware. Many have reserved slip, i.e. the red slip is applied in bands, and thereby the original body colour of the pot which was lighter in tone appears more prominent, and gives an impression as if the lighter was used for painting on slipped red surface. Sometimes the red slipped bands bordered by double lines of black colour decorated the pots. All the sherds belong to the pots with possibly globular body.

Use of white colour

Besides the reserved slip method of decoration, white colour was used on burnished red surfaces. Two potsherds, both being parts of globular pots were decorated in white colour. One of them has a broad white band on the shoulder, just below the neck and the other sherd has a line with dots on either side of it.

Use of black colour

An almost complete pot with carinated shoulder, painted with designs in black colour on matt red surface is quite modern. Such pots are made by the local potters even today.

Shapes in the painted red ware are $1A_9$, $1A_{10}$, and $5C_1$ and decorations are D30-D34 (illustrated).

140. $1A_9$ No. 331 DWK (3), flaring mouth with ledged rim constricted neck and bands painted in black colour on matt surface on the inner side of the rim and at the neck outside.

141. $1A_{10}$ No. 106 DWK(1), constricted neck of a pot with groups of horizontal lines painted in black colour at the neck and on the shoulder.

5C *Pots with carination at the shoulder* (Fig. 27, Nos. 143-147; Fig. 28, No. 142)

142. $5C_1$ No. 100 DDK (1), a pot almost complete, having a short vertical neck, wide mouth, out-turned and over hanging rim, narrow shoulders with carination and sub-spherical body. A combination of decorations
D30 bands, zigzag, left slant lines, hatched lozenges and hanging loops, are painted in black colour over malt red surface.

143. D31 No. 386 DWK (3), sherd of a globular pot with burnished red surface and a spiral painted in white colour over it.

144. D32 No. 228 DWK (2), part of a pot with globular body, sloping shoulder and reserved matt red slip.

145. D33 No. 230 DWK (2), shoulder part of a globular pot with a broad red band flanked by double black lines.

146. D34 No. 231 DWK(2), shoulder part of a pot with burnished outer surface and a broad band painted in white colour below the neck portion.

147. D35 No. 234 DWK (2), a potsherd with burnished red outer surface, and decorated with a band and dots on either side of it in white colour.

Burnished Black Ware (Figs. 29, 30, 31, 32, Nos. 176-180)

The following shapes occur in this group of black ware.

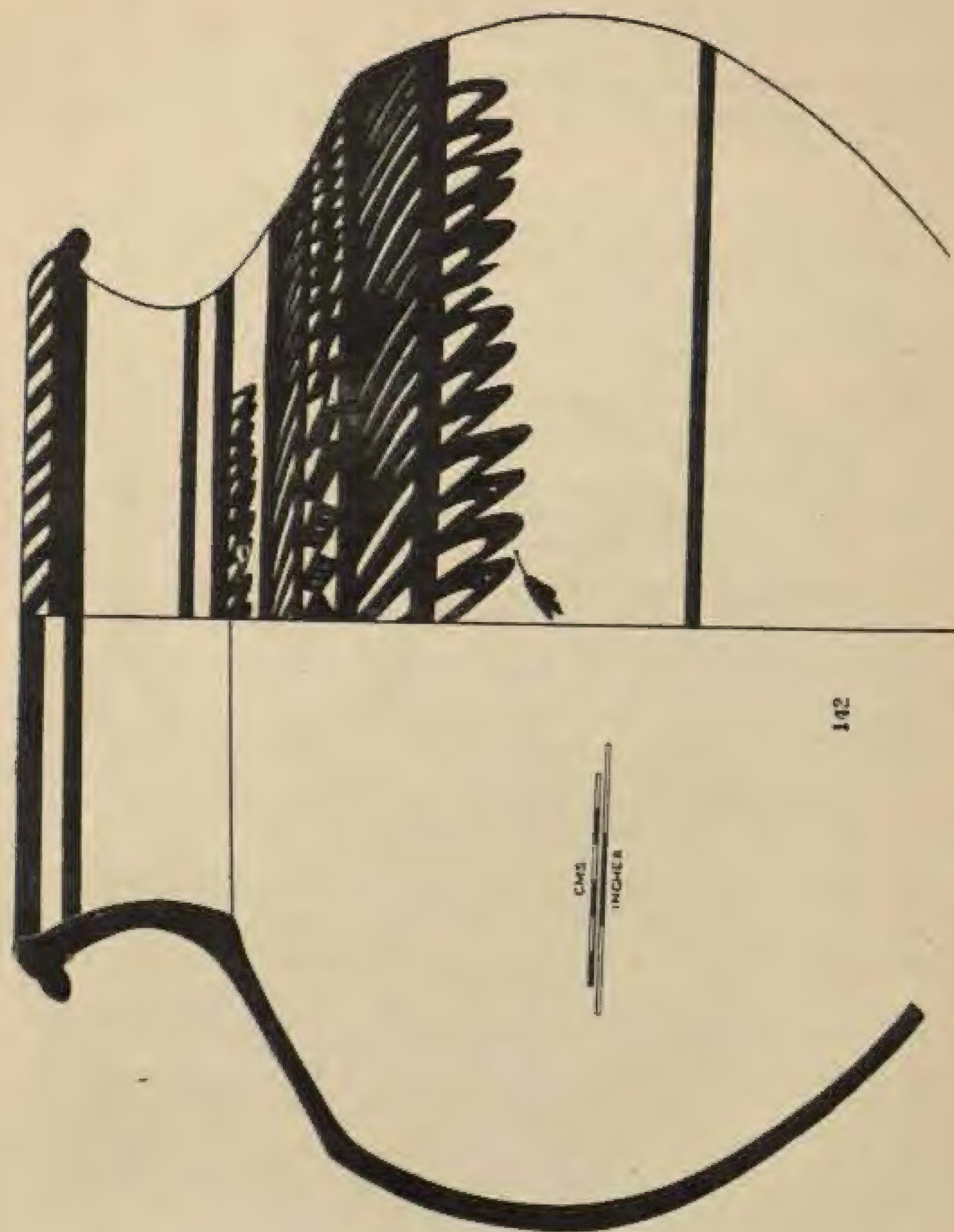


FIG. 28: Period IV, Painted Red Ware, No. 142 (See p. 87)

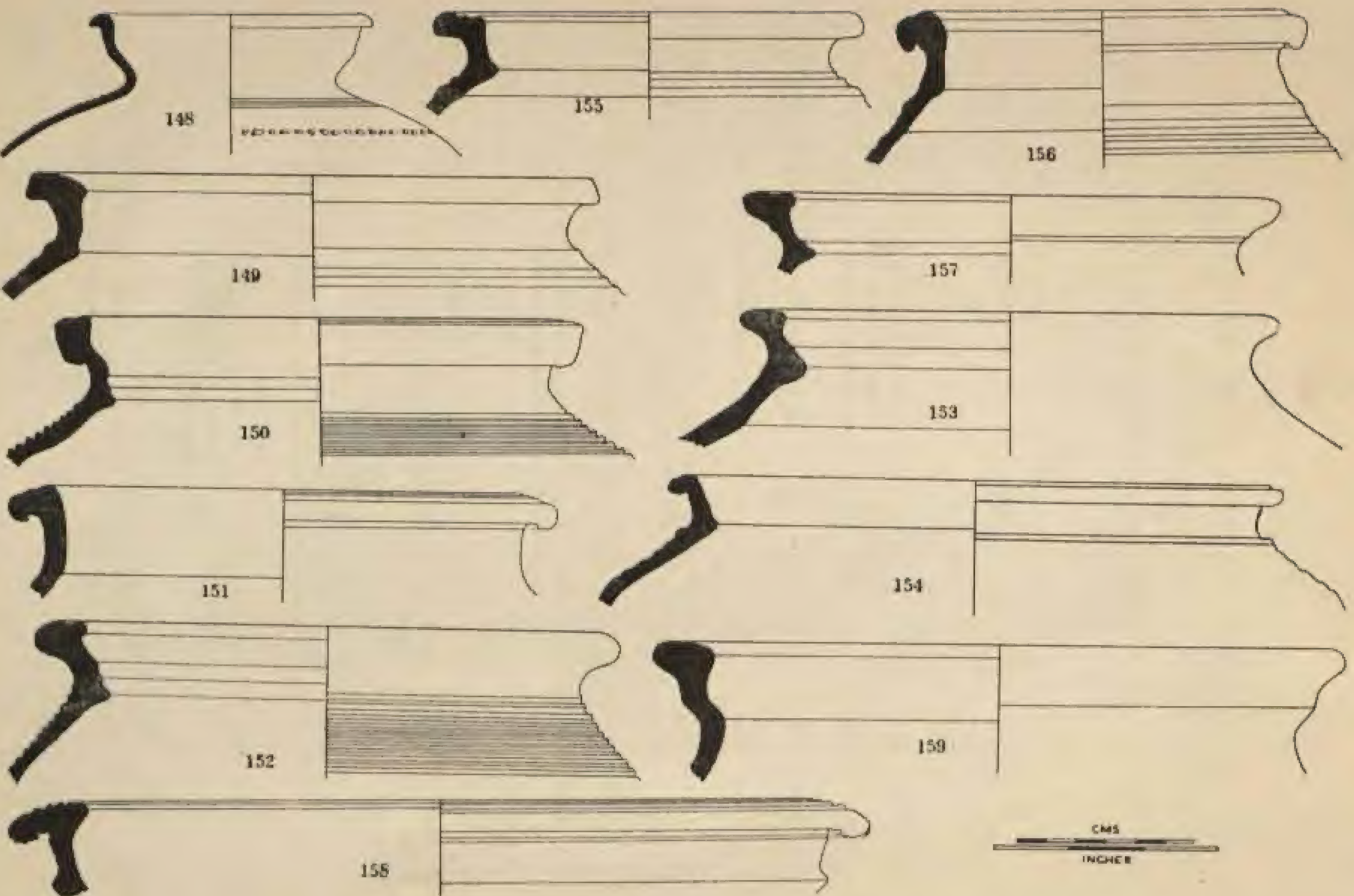


FIG. 29: Period IV, Burnished Black Ware, Nos. 148-159 (See pp. 87 and 90)

$1D_3$, $1E_1$, $1F_1$, $1F_6$, $1G_4$, $1J_3$, $2E_1$, $3D_1$, $3E_1$, $5A_1$, $5A_3$, $7A_1$, $8C_1$, $9A_1$, $9A_2$, $13C_1$, 3D, 14B (Not illustrated), $1C_4$, $1D_5$ to $1D_{16}$, $1F_7$, $1G_6$, $1G_7$, $1J_4$, $2E_2$, $3D_2$, $3E_2$, $3F_2$, $3F_3$, $3G_2$, $3H_1$, $3J_1$, $6C_1$, $9A_4$, $9A_5$, $9B_5$, $9B_6$, $9B_7$, and $13C_1$ (illustrated).

148. $1C_4$ No. 206 DWK (2), constricted neck and out-turned rim of a pot with very thin section, outer surface well burnished and having pricked dots (D9) on the shoulder.

149. $1D_5$ No. 382 DWK (3), short vertical neck with flattish collared rim, squared at the edge and lightly grooved on the shoulder.

150. $1D_6$ No. 325 DWK (3), short vertical neck, rectangular rim and grooved shoulder.

151. $1D_7$. No. 301 DWK (3), short vertical neck, grooved and flat rim. (See No. 154)

152. $1D_8$ No. 313 DWK (3) constricted neck, projecting beaded out rim, also projecting on the inner side and grooved shoulder.

153. $1D_9$ No. 391 DWK (3), constricted neck, narrow flattish collared rim projecting on either side.

154. $1D_{10}$ No. 338DWK (3), short flaring neck, narrow collared rim, projecting out and grooved shoulder.

155. $1D_{11}$ No. 333 DWK (3), short flaring neck and broad grooved and flat rim. (See No. 150).

156. $1D_{12}$ No. 321 DWK (3), short flaring neck, beaded out rim with an under cut outside and grooves on top, and a raised band and grooves on the shoulder.

157. $1D_{13}$ No. 359 DWK (3), constricted neck, flaring mouth and rim with a deep groove on top.

158. $1D_{14}$ No. 392 DWK (3), short flaring neck, broad hanging out collared rim projecting also the inner side and grooved top.

159. $1D_{15}$ No. 395 DWK (3), flattened and projecting beaded rim and a ridge below it.

160. $1D_{16}$ No. 305 DWK (3), flat topped and bevelled rim and constricted neck.

161. $1F_7$ No. 361 DWK (3), flaring mouth, concave neck with a ridge on the interior, rounded rim and grooves on the inner side.

162. $1G_6$ No. 324 DWK (3), flaring mouth, concave neck, bevelled out under-cut rim, and a ledge on the inner side.

163. $1G_7$ No. 371 DWK (3), constricted neck, flaring mouth, bevelled out rim and grooved on the inner side on the shoulder.

164. $1J_4$ No. 361 DWK (3), a tubular spout.

165. $2E_2$ No. 303 DWK (3), pot with constricted neck, beaded out and under cut rim, and ridged carination at the belly. It is burnished only on the shoulder portion upto the carination and is decorated with incised right slant lines (D9).

166. $3D_2$ No. 383 DWK (3), part of a basin with bevelled and under-cut rim, a flat loop handle attached to the rim and ledged carination and round base. Inner side and upto carination it is burnished.

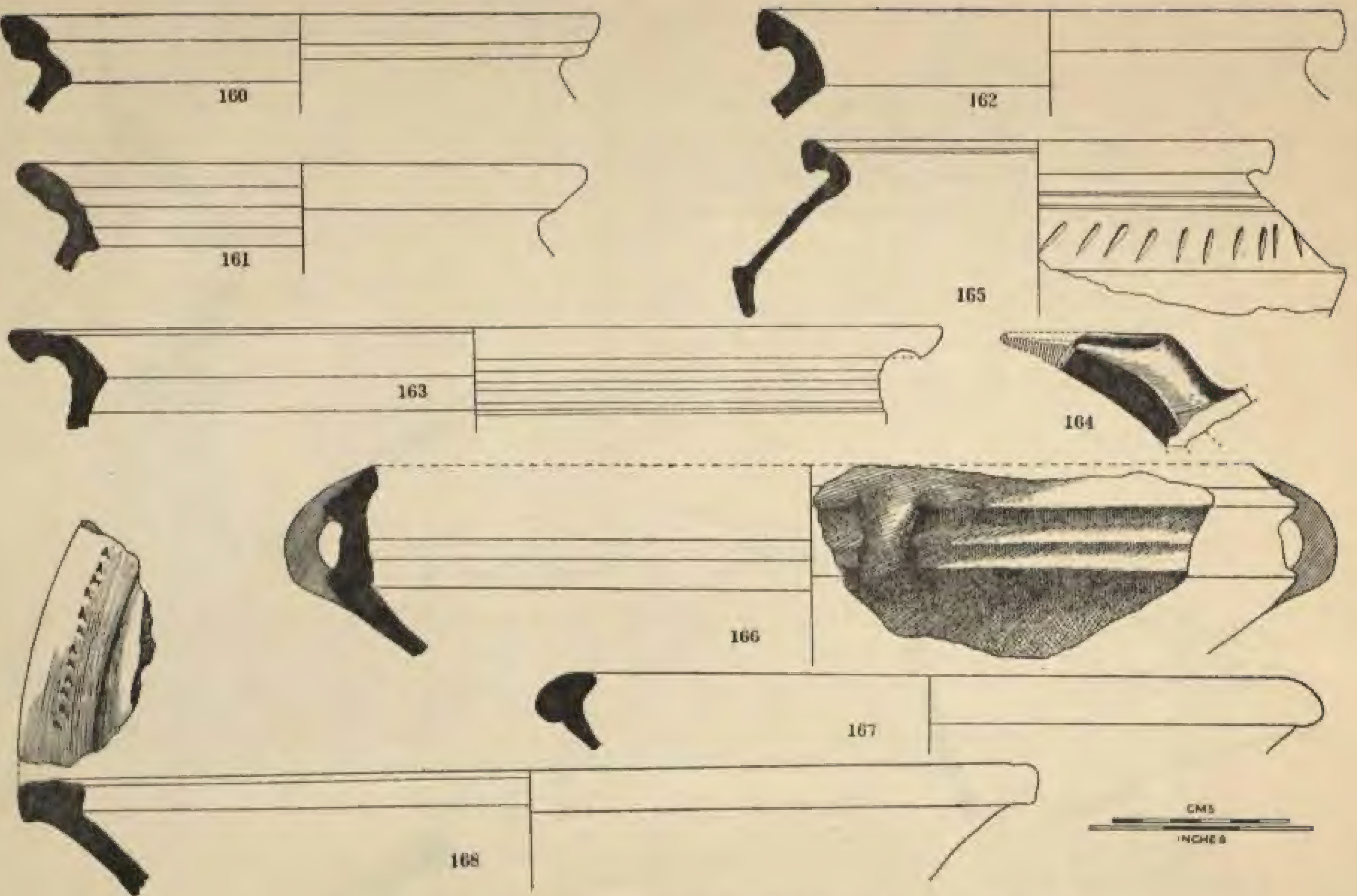


FIG. 30: Period IV, Burnished Black Ware, Nos. 160-168 (See pp. 87, 90 and 93)

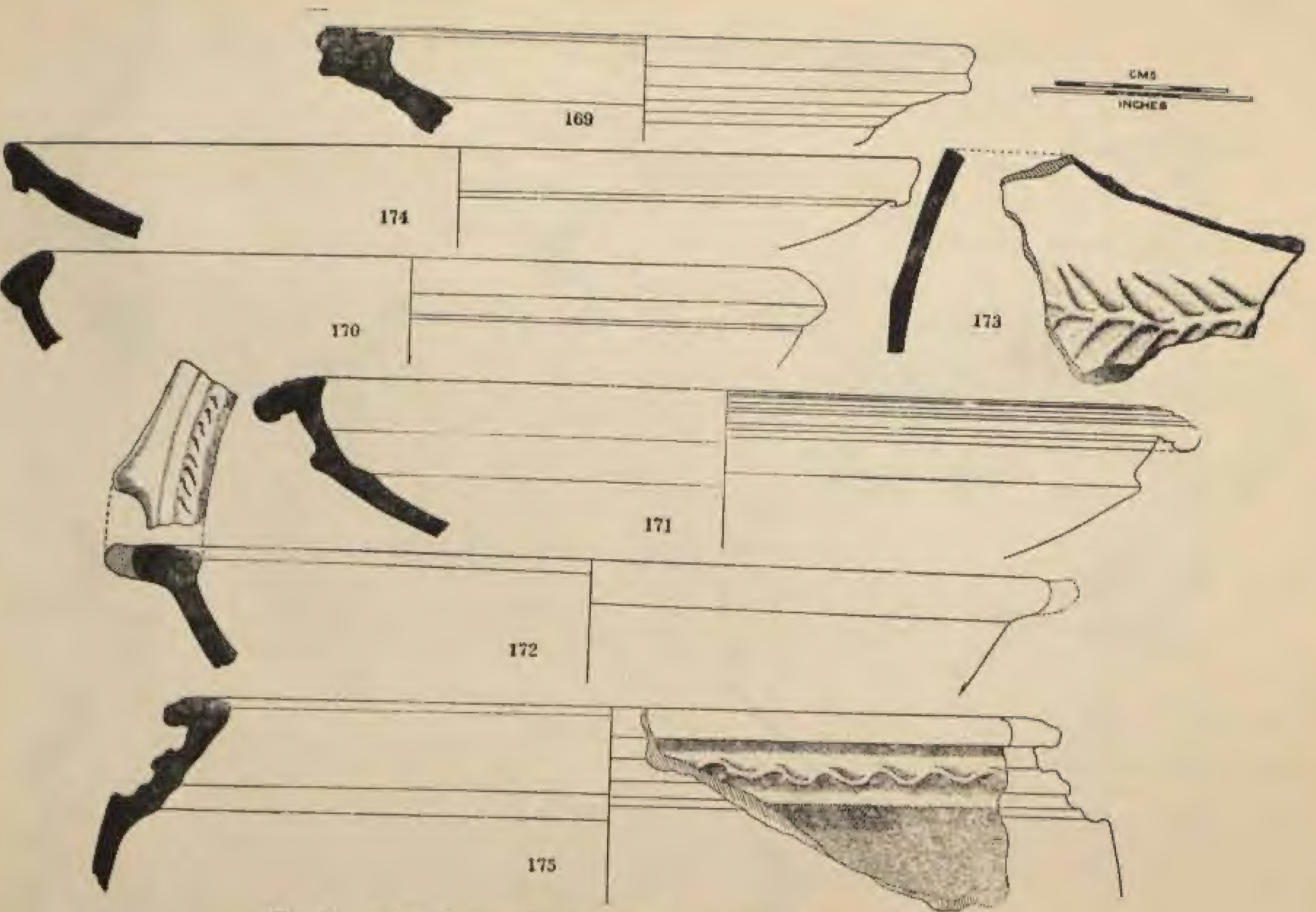


FIG. 31: Period IV, Burnished Black Ware, Nos. 169-175 (See pp. 87 and 93)

167. $3E_2$ No. 342 DWK (3), broad nail-headed rim and convex base.

168. $3F_2$ No. 336 DWK (3), flat rim decorated with pricked holes (D9), projecting inside and flattened outside, the base being round. Inner surface is burnished.

169. $3F_3$ No. 320 DWK (3), broad, flat collared rim of a basin with grooved edge.

170. $3G_2$ No. 331 DWK (3), part of a basin with bevelled out and inturned rim.

3H *Basins with sharply out-turned rim* (Fig. 31, No. 171)

171. $3H_1$ No. 263 DWK (3), part of a basin with broad rolled out and projecting rim and ledged shoulder.

3J *Basins with lug handles on the rim* (Fig. 31, Nos. 172-175; Fig. 32, Nos. 176-180)

172. $3J_1$ No. 268 DWK (2), lug of a basin with a small projecting knob. The rim is decorated by slant and elongated triangles impressed on it.

173. D36 No. 295 DWK (3), shoulder part of a pot decorated with impressed tree designs.

174. $6C_1$ No. 306 DWK (3), a shallow concave pan with rounded rim and a barbed ridge outside below the rim. Only inner surface is burnished.

175. $9A_4$ D37 No. 385 DWK (3), constricted neck, ledged carination and an applique wavy line on the D37 shoulder and projecting out rim.

176. $9A_5$ D38 No. 309 DWK (3), constricted neck, beaded rim, flat on top with a broad groove on the interior, sloping shoulder with broad and shallow grooved and a ledge decorated with a row of pricked elongated holes at intervals.

177. $9B_5$ No. 355 DWK (3), constricted neck, broad flaring mouth and round rim, sloping shoulders with light grooves.

178. $9B_6$ D39 No. 388 DWK (3), constricted neck, projecting out beaded rim with impressed triangles on it.

179. $9B_7$ D40 No. 397 DWK (3), constricted neck, hanging out and projecting rim on the inner side, sloping shoulders with a narrow raised band pricked at intervals.

13C Storage jars of medium size with beaded rim.

180. $13C_1$ No. 356 DWK (3), concave neck, bevelled in rim with under-cutting and the projecting on the inner side.

Coarse Black Ware (Fig. 32, Nos. 181-184; Fig. 33, 34, Nos. 185-196)

The following shapes occur in this group of black ware:—

$3E_2$, $3F_1$ (not illustrated).

181. $2E_3$ No. 369 DWK (3), a pot with ridged carination flattened and projecting narrow rim and round base.

182. $2E_4$ No. 338 DWK (3), ridged carinated part of a pot with grooves and a small ridge on the shoulder.

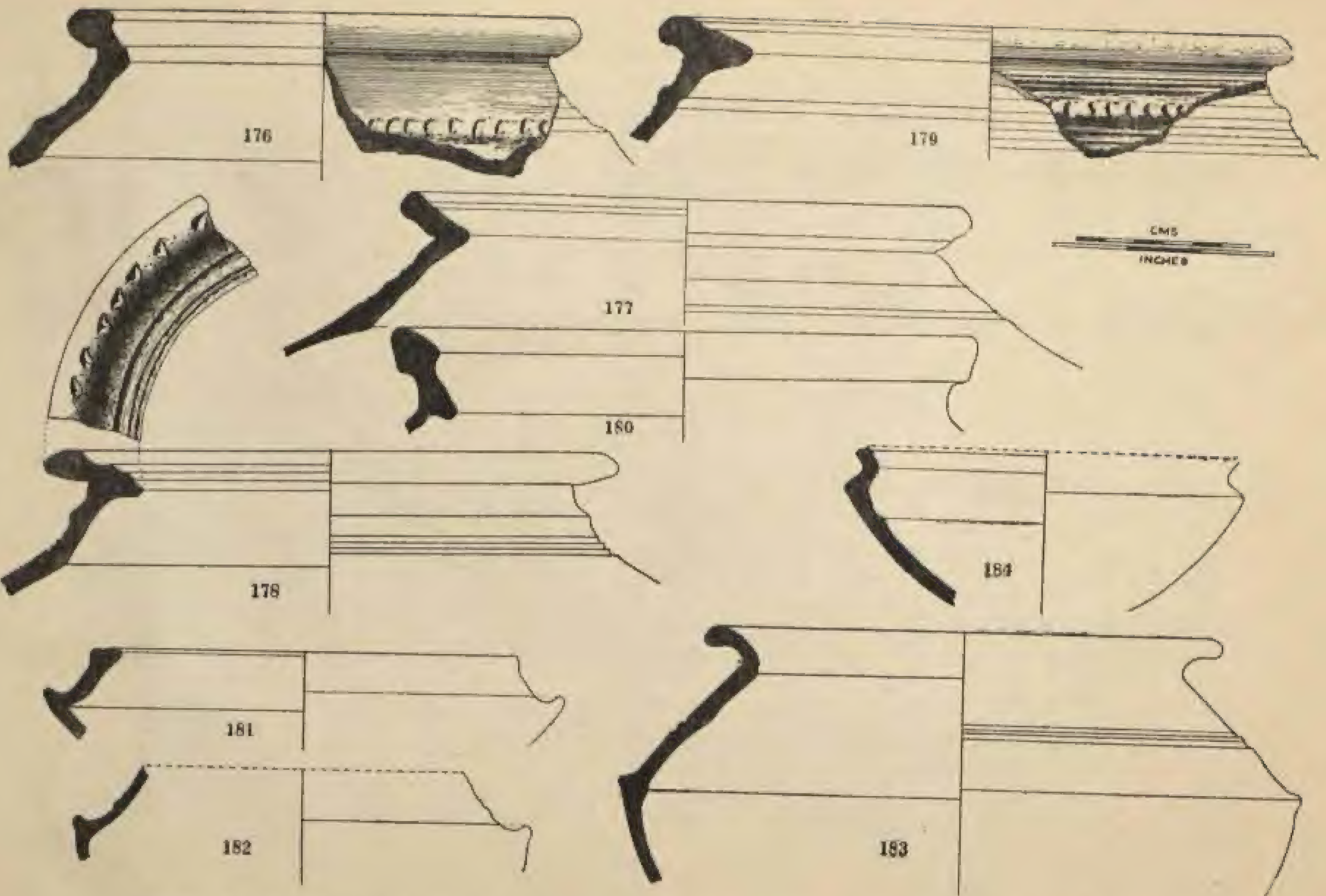


FIG. 32: Period IV, Burnished Black Ware, Nos. 176-180, Coarse Black Ware, Nos. 181-184 (See pp. 87, 93 and 96)

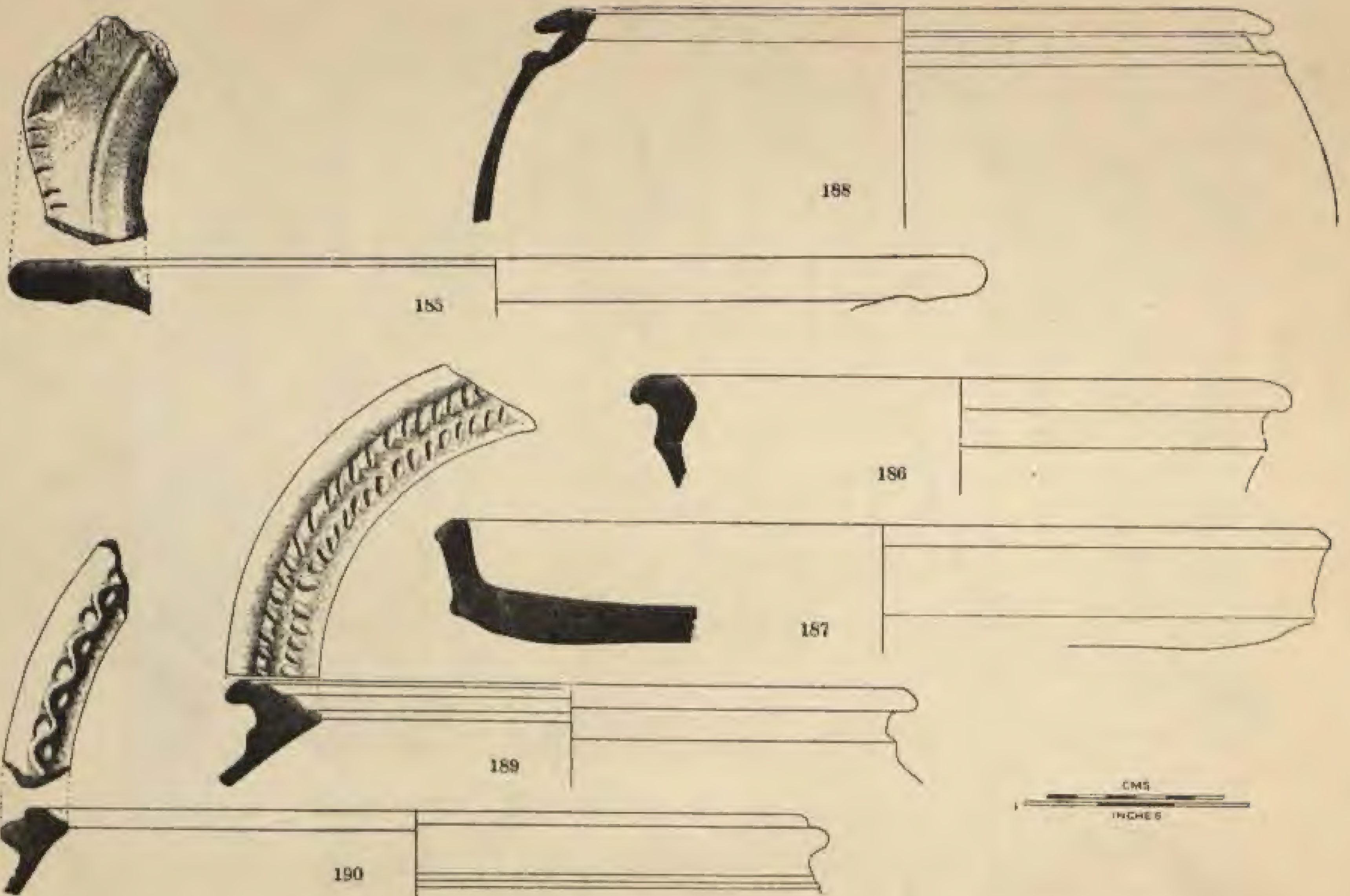


FIG. 33: Period IV, Coarse Black Ware, Nos. 185-190 (See pp. 93 and 96)

183.	$2E_5$	No. 105 DWK (1), constricted neck, flaring mouth, out-turned rim, ridged shoulder and round base with soot sticking on it. Possibly it was a cooking pot.
	2F	Pots with ledged carination and sharply flaring mouth.
184.	$2F_1$	No. 381 DWK (3), ledged carinated pot with sharply flaring mouth concave neck and round base.
185.	$3J_2$	No. 265 DWK (2), lug of a basin decorated with notched on the rim and a circular depression on the projected lug.

3K *Basins with beaked rim and shoulder ridged.* (Fig. 33, Nos. 186-190; Fig. 34, Nos. 191-196)

186.	$3K_1$	No. 334 DWK (3), out-turned sharp hanging rim of a basin and a ridge below it.
187.	$6D_1$	No. 354 DWK (3), dough plate with low flaring wall and flat coarse base, inner side having burnished surface.
188.	$8A_3$	No. 109 DWK (1), part of a pot with inturned mouth, overhanging rim and ledged shoulder.
189.	$9B_5$ D41	No. 363 DWK (3), constricted neck, broad flaring mouth rounded rim, decorated with double row of incised short slant lines.
190.	$9B_9$	No. 379 DWK (3), constricted projecting rim with finger tip decoration on top.
191.	$10A_2$	No. 369 DWK (3), domical lid with a knob hold flattened on top.
192.	$10A_3$	No. 389 DWK (3), domical lid with disc hold.
193.	$10A_4$	No. 391 DWK (3), domical lid with solid knobed disc hold.
194.	$10D_2$	No. 393 DWK (3), recurved sided lid with flattened knob handle.
195.	$10D_3$	No. 382 DWK (3), recurved sided lid with disc hold and bevelled rim.
196.	$10D_4$	No. 319 DWK (3), recurved sided lid, rounded rim and a ledge on the under side near the rim.

Celadon Ware (Fig. 34, Nos. 197-198)

Only five pieces were found; four from layer (3) and one from layer (2). All these sherds have light grey and compact core, and surfaces having thick and uniform coating of olive-green glass glaze.

This ware was totally absent in the earlier three periods. It resembles the modern Indian made China ware. All the sherds are devoid of any decoration.

The following shapes occur in this ware.

197.	16A	No. 318 DWK (3), bowl with slightly bulging body, flaring mouth with rounded rim, concave neck and possibly round base.
198.	17A	No. 321 DWK (3), part of a ring-base of a vessel with thick side.

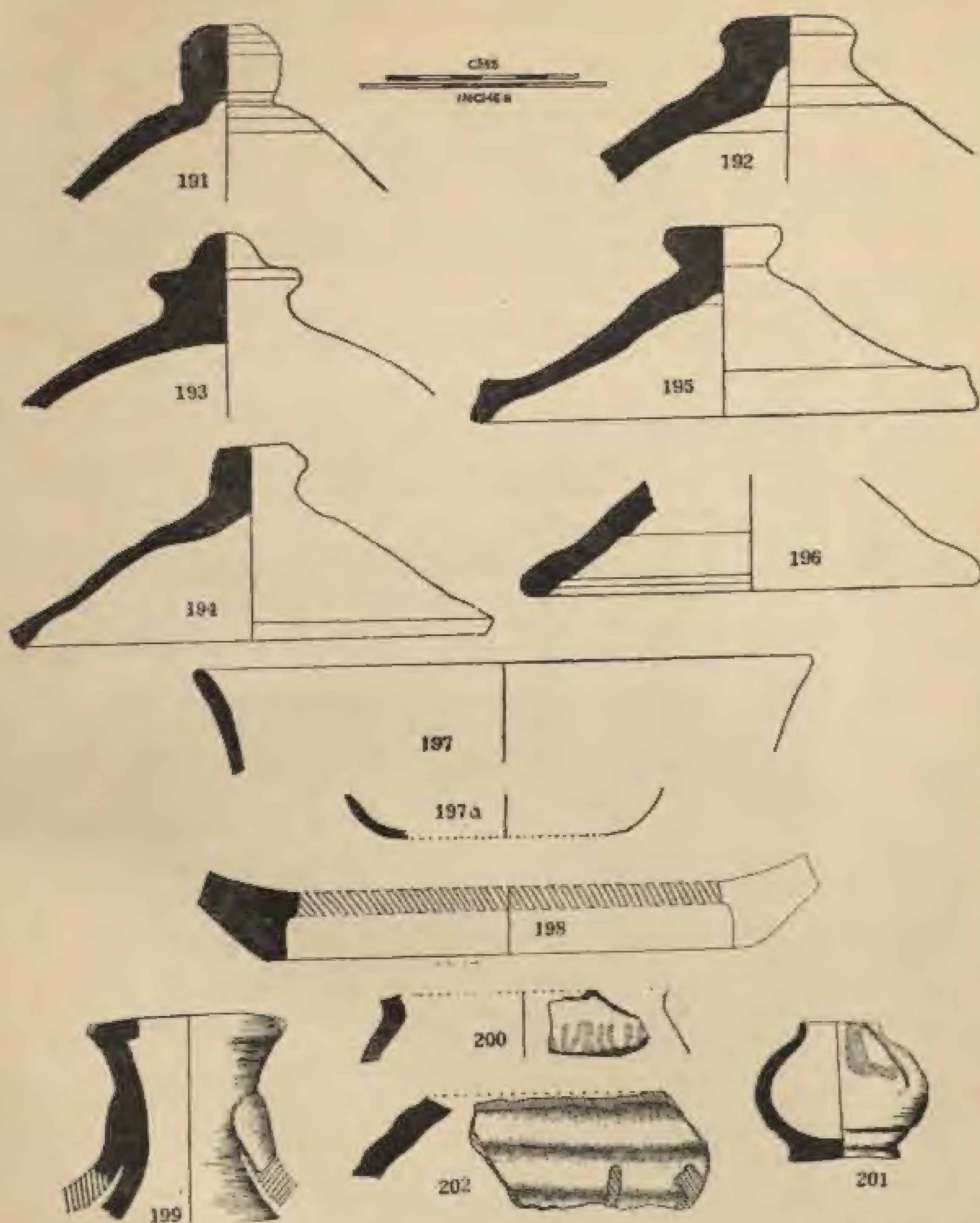


FIG. 34: Period IV, Coarse Black Ware, Nos. 191-196; Celadon Ware, Nos. 197-198; Kaolin Ware, No. 199; Glazed Ware, Nos. 200-202 (See pp. 93, 96 and 98)

Kaolin Ware (Fig. 34, No. 199)

A solitary piece, being the neck of a pot, was found in period IV. This ware was being absent in the earlier periods. Its core is compact, pinkish white, while the surface is buff.

199. 18A No. 342 DWK (3), narrow concave neck of a pot with remains of two flat loop handles which were attached to the rim and the shoulder.

Glazed Ware (Fig. 34, Nos. 200-202)

It is an earthen ware coated with glass glaze. The core is compact and light red in colour.

The following shapes were found in this ware.

200. 19A No. 354 DWK (3), shoulder portion of a pot with concave neck, creamish white glass glaze on outer surface and upto the neck on the inner surface.

201. 19B D41 No. 101 DWK (1), a complete small pot with discoid base bulbous body, and thin, short round rim. The pot is glazed entire on the interior and on the exterior, only upto the shoulder. It is decorated with incised five lines running from the neck to the belly and are coloured with violet colour, in between these lines are irregular patches of turquoise-green colour.

202. 19C No. 201 DWK (2), a thick sherd with corrugated surfaces, outer one glazed with Prussian blue glass and emeralled green on the inner surface.

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